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A
NEW AND IMPROVED SYSTEM
OF
MEDICAL BOTANICAL
PRACTICE.

ALSO,
A CONCISE VIEW OF ANATOMY AND
SURGERY,
CONTAINING A MEDICAL CLASSIFICATION OF THE
BEST VEGETABLE PRODUCTIONS, WITH THE BETTER
MODE OF COMPOUNDING AND ADMINISTERING
IN THE TREATMENT OF DISEASE.

TO WHICH IS ADDED
A SHORT TREATISE ON
OBSTETRICKS,
AND A
MEDICAL GLOSSARY.

BY CHARLES MILES, MED. BOT.

CLEVELAND :
PRINTED FOR THE AUTHOR.
1829.

DISTRICT OF OHIO, TO WIT:

BE IT REMEMBERED, That on the sixth day of May, in the year of our Lord one thousand eight hundred and twenty-eight, and in the fifty-second year of the American Independence, Theodore and Charles Miles, of said District, have deposited in this office the title of a book, the right whereof they claim as authors and proprietors, in the words and figures following, to wit :

“A new and improved system of Medical Botanical Practice ; also, a concise view of Anatomy and Surgery : containing a medical classification of the best vegetable productions, with the better mode of compounding and administering in the treatment of disease. To which is added a short treatise on Obstetrics, and a Medical Glossary. By Charles Miles, Med. Bot.”

In conformity to the act of the Congress of the United States, entitled “An act for the encouragement of learning by securing the copies of maps, charts and books to the authors and proprietors of such copies during the times therein mentioned,” and also to an act, entitled “An act supplementary to an act, entitled “An act for the encouragement of learning by securing the copies of maps, charts and books to the authors and proprietors of such copies, during the times therein mentioned,” and extending the benefits thereof to the arts of designing, engraving and etching historical and other prints.

W. KEY BOND,

Clerk of the District of Ohio.

INTRODUCTION.

WHEN a system is offered to the public differing fundamentally from standard works, more particularly on Medicine, it is reasonable to expect that the principles on which the system is predicated will be set forth. It will accordingly be examined under the four following heads, viz:

1. Of what are animal bodies composed.
2. How supported and perpetuated.
3. What constitutes disease.
4. The antidote or remedy for disease.

The elementary substances composing animal bodies are much more numerous than was supposed by the ancients; which, according to the doctrine of Aristotle, (and the same has been copied by some recent pretended theorists,) was confined to the four following: air, fire, water and earth. But its falsity has long since been detected by chemical analysis, and proved that neither of those substances can be considered elements, if by the term we mean a simple substance. For air, in its purest state, contains oxygen and nitrogen; water is composed of hydrogen and oxygen; earth is still more complex, being composed of silice, clay, lime, &c. Less exception, however, may be taken to fire as an element, although it is inconfined, and is connected with light, electricity and magnetism, and combines with all bodies in a latent state: yet it cannot be considered as one of the constituent principles of animal bodies.

First. Animal bodies have nitrogen for their base, which has in connection carbon, oxygen and hydrogen, in which may be comprised the immediate materials of animals, consisting of albumen, gelatine and fibrine. To these may also be added other substances, as forming the hard parts, such as lime, phosphorus, sulphur, alkalis, &c.

Secondly. The support and perpetuity of animal bodies depends on two principles, viz: oxygen and nutrition. Oxygen from the air, by coming in contact with the other elementary substances through the medium of respiration and cutaneous absorption, produces new compounds, consisting of carbonic acid gas, water, septic acid, and consequently free, caloric, or sensible heat. It is also absorbed and secreted by the brainular system, and converted into a peculiar substance called nervous fluid, giving sensation, motion and volition to the whole animal economy. From nutrition the system is perpetuated, which by reception digestion, the successful processes of

assimilation and conversion, supplies the wastes and continues the growth of the system; then by decomposition and expulsion, it is dismissed the service, to give place for new and animalized substances, which in their turn, after passing through the same successful processes, go again into the common stock of heterogeneous materials, to be rendered subservient to nutrition by vegetable life.

Thirdly. The immediate cause of disease is constituted in a torpidity, relaxation or an exhaustion of the nervous system, producing a derangement and diminution in all the animal functions; consequently the more viscid and excrementitious substances are not removed as they become deleterious by decomposition, and septic acid (the germ of disease) increases in the same proportion. Constriction, the natural consequence of relaxation, prevents the free caloric from passing off as it accumulates, thus producing an increase of temperature on the surface called fever.

Fourthly. The antidote or remedy for disease may be comprised under the four following principles, viz: *First.* Of nervines, to restore the lost energy and excitement in the nervous system. *Second.* Of cathartics, to excite an increased action in the prima via, and remove septic acid and other excrementitious and offensive substances. *Third.* Of sudorifics, to remove constrictions or spasms on the exhalants, and promote an increased excretion of the viscid, wornout and noxious fluids, and equalize the circulation. These constitute the leading principles in the removal of disease. *Fourth.* Of tonicks, to produce a proper excitement in the *parietes* of the stomach, increase their secretions, and thereby promote the assimilation of nutrition.

Notwithstanding the numerous publications on medicine, and although some of them are from the ablest pens that ever graced the literary world, yet there is none to which numerous objections have not arisen. Most of the medical productions now extant are too voluminous and abstruse, and so much encumbered with learned lumber, medical references and technicalities, as to be completely above the comprehension of persons of common advantages and capacities; while others are diminutive, illiterate, and founded on such false premises as not only to be wholly uninteresting to the scientific, but are also calculated to mislead the unlettered: and in all, there appears to be a great want of knowledge in medical botany. In contemplating on the great variety in the vegetable kingdom, which perfumes and beautifies our groves, fields and gardens, we are naturally led to enquire concerning the cause of such a profusion, when so few are suited to the growth and perpetuity of the system under a healthy standard. A belief in an omniscient Being, who does nothing in vain, will bring us irresistibly to the conclusion, that they are destined to answer some important purpose in the restoration of the system while laboring under disease, or a derangement of its chemical operations which constitute heat and animation.

Stimulated by this unpardonable neglect of one of the most propitious bounties of Providence, aided by several years experience in the practice of medicine in the Northern, Western and Southern States, and a particular examination of the vegetable productions of

the different States to ascertain their specific qualities, will, I trust, suffice to convince the reader that the undertaking has not been merely to increase the number of medical works, but to introduce a concise, plain and philosophical system of botanical practice, unincumbered with foreign matter and simplified to every capacity.

In regard to the composition and arrangement of the work, many circumstances might be mentioned by way of apology for the numerous inaccuracies and omissions. But in a work embracing so great a variety of subjects, consisting almost entirely of practical information, and probably comprising more useful matter than has ever appeared in so small volume, it is to be hoped that candor will incline the reader to spread the mantle of charity over the errors that have crept into the work, as such things are unavoidable in the first impression, and which will be remedied in the next edition.

In the compilation of the following sheets, many subjects might have been considerably extended: and, indeed, it appeared necessary, to give a full understanding of the whole matter intended to be illustrated. Others might also have been much abridged, had the work been designed exclusively for one class of citizens. The author, however, has endeavored equally to avoid hasty brevity and tedious detail. How far he has succeeded, is submitted to the consideration of a candid public.

The work now offered embraces almost every subject connected with the preservation of the species; hence the inquisitive reader will find a concise theory, containing the elements composing animal bodies, the principles and manner in which nature, by the oxydation of the different elementary substances, aided by the assimilation of nutrition, designed them to be perpetuated; in what disease is constituted, and the principles of application in its removal. Anatomy unfolds to view the economy of nature in carrying on the grand mechanism; and by a knowledge of the several viscera, circulation, and of all the glandular secretions and excretions, the philosophical practitioner is furnished with materials, (as the basis of a superstructure,) to direct all his prescriptions. Medical botany having been the primary object in this publication, no pains have been spared in its examination, designation, classification and composition. The frequent fatal consequences resulting from bleeding, not only from a puncture of a nerve tendon, artery, &c. but also from wasting that precious fluid, (the blood) the source of animal support and regeneration, has given rise to a short dissertation on the subject. Surgery, and more particularly the treatment of diseases, is a matter of the greatest moment, and every attention has been given in particularizing their cause, symptoms, and the most judicious mode of administering to their removal; to which is subjoined a brief sketch of midwifery, and a vocabulary of medical terms. To facilitate the mode of consulting the work, a copious table of contents has been annexed.

Previously to closing my introductory remarks, I beg leave to suggest a few observations for the consideration of the married ladies, as occupying one of the most important stations in which a human individual can be placed. I should be much wanting in truth as

well as in courtesy, not to place you upon an equilibrium, in a mental point of view, with the other sex, or not to award you great influence in the religious, moral and civil world; and a reference to history clearly shows that your weight in the scale of beings is in proportion to the advancement of literature and civilization. How delightful the task for the intelligent mother to wander with her tender offspring in the paths of virtue and literature, unfolding to their latent minds as they begin to expand the beauties of the one and the benefits of the other. And how pleasing would be the thought to the man of understanding, whose mind is engrossed with business, to know that his wife not only conducted the dispositions of his children with equanimity and correctness, but was also qualified to watch over their healths, and administer to their relief on the first indication of indisposition.

Those married ladies who are bringing up families of children, will find much valuable instruction relative to the origin and cause of the numerous diseases to which they are liable, and the proper course of treatment to remedy those causes before they endanger the life of the child or incur the expense of a physician. It will also put them in possession of correct principles, not only on medicine, but also relative to the elementary substances of animal bodies, and the manner in which nature designed them to be supported; which may be taught to their daughters whom they are fitting to occupy stations equally responsible as those to which they have been called. By thus instilling in their tender minds the principles of things, they become as familiar as any other domestic duty, however trivial. And may I not be allowed to second the suggestion of the immortal Rush, that the period was probably not far distant when every person would go as familiarly to the fields for their medicines, as they do for their bread stuff.

It is not to be presumed that every person will find such interesting matter as that contained in a novel or a tale; but I trust the intelligent and philosophical will not only be entertained but instructed.

Although the principles on which the practice is founded are entirely new, still I am sanguine that they are philosophical and strictly correct. The sentiments and theories which I have inculcated, are the result of much observation and reflection, derived from the intercourse which I have had with society, the productions of nature, and the best elementary works.

They are most cordially submitted for the investigation of the publick; and I shall patiently await the issue, and posterity will record it.

That you may accept of this as intended for a source of instruction, calculated to enlarge your capacities and opportunities for usefulness through life, is the earnest wish of

THE AUTHOR.

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GLOSSARY.

Absorbents. Vessels that take up fluids from cavities in the body.

Abdomen. The belly.

Alvine excretions. Evacuations by stool.

Acrimony. Sharpness, pungency.

Albumen. Coagulable lymph. The white of eggs, &c.

Alcohol. High wines, spirits of wine.

Anima Medica. The natural healing power.

Anti-septics. Medicine which prevents mortification.

Anti-spasmodic. Medicines to remove spasms.

Anodynes. Medicines to remove pain.

Abscess. A tumour that contains pus.

Affinity. The attractive tendency of substances.

Aneurism. Dilation of an artery.

Asphyxia. Faintness, a partial suspension of the heart.

Analysis Chemical. Separation of the constituent parts of compounds.

Atrophy. Nervous consumption, wasting of the body.

Aromatics. Medicines having a grateful spicy smell.

Aperients. Gentle laxatives.

Anti-corbuticks. Medicines to obtund acrimony, remove scurvy, &c.

Assimilation. The conversion of nutrition into our own substance.

Auxiliary. Helping, assisting.

Azote. The French term for nitrogen. It is the base of animal bodies, and of deleterious air; it constitute three fourths of atmosphere air, combined with oxygen, forms nitrous acid, or aqua-fortis.

Animal functions. Are constituted in circulation, digestion, respiration, assimilation and secretion.

Base. The principle or foundation.

Botany. Science of plants.

Caries. Rottenness of bones.

- Chalybeates.* Medicines containing iron.
- Carbon.* The base of vegetable substances, the radical of carbonic acid, deleterious air, disengaged by the decomposition of vegetables.
- Chronic.* A disease of long standing.
- Constipation.* Costiveness.
- Choylification.* The act of converting nutritious substances into chyle.
- Catheter.* An instrument to draw off the urine.
- Calculi.* Stone-like substance in the human bladder.
- Cataplasms.* Stimulants applied to the feet.
- Caloric.* The chemical term for latent heat.
- Climacteric.* A critical year in life, as the 7th, 21st, &c.
- Cochincal.* A drug, an insect taken from the Indian fig tree.
- Capillary.* Minute tubes.
- Diathesis.* A condition of the body.
- Decomposition.* The separation of the constituent principles of bodies.
- Dentition.* Cutting teeth.
- Diagnosi.* Symptoms distinguishing diseases.
- Diaphoresis.* Perspiration or sweat.
- Demulcents.* Medicines to diminish the effects of stimuli.
- Ebullition.* Boiling.
- Effervescence.* An intestine motion occasioned by the disengagement of gaseous substances.
- Elements.* Bodies incapable of decomposition.
- Excrescence.* Any preternatural formation of flesh.
- Exanthemata.* Eruptions, pustules, &c. on the skin.
- Eruclations.* Belching of wind from the stomach.
- Fæces.* The arvine excretions.
- Febrifuge.* A medicine that abates fever.
- Fætid.* Emitting an offensive scent.
- Fœtus.* The child in the uterus after the fifth month.
- Formic acid.* The acids of ants or pismires.
- Fungus.* Proud flesh.
- Fusion.* Melting.
- Funis.* Naval string of infants.
- Gas.* Substances converted into elastic fluids by heat.
- Galvanism.* Chemical electricity.
- Heterogeneous.* Foreign, unlike, dissimilar.

Hydrogen. A simple substance, one of the constituents of water.

Indication. That which shows what ought to be done.

Lacteals, Absorbents that take up the chyle in the intestines.

Lactic-acid. The acid of sour milk.

Lymphatics. Absorbents that convey a fluid called lymph.

Laboratory. A room fitted for chemical operations.

Meconium. Fæces of unborn infants.

Oxygen. A simple substance, the principle of animation, combustion, acidity, and pentrescency.

Oridize. To combine oxygen with a body, without producing acidity.

Ovaria. Small bodies attached to the uterus, resembling eggs.

Ossification. The changing of substances into bone.

Os-externum. The external organs of generation.

Placenta. The after birth or secundine.

Perineum. Parts between the privates and arms.

Paroxysm. A fit, a periodical return of a disease.

Pathology. The doctrine of diseases.

Pectorals. Medicines that act on the chest.

Physiology. The doctrine or science of animal bodies.

Pubes. The private parts.

Pneumonia. Inflammation of the chest.

Prima Via. The stomach and bowels.

Prolopsus Uteri. A falling of the uterus.

Rubefacients. Medicines that redden without blistering.

Roborants. Strengthening medicines.

Rigour. Coldness on the surface of the body.

Saponacious. Soapy, having appearance of soap.

Sinapism. A poultice of mustard and vinegar.

Salivation. An increased secretion of saliva.

Sanquiferous System. The blood vessels.

Subsultus Tendinum. Twitching of the tendons.

Sphincture. Contracting muscles that closes some passage.

Sui Generis. Of itself; not like any thing else.

Saturate. To impregnate till no more can be received.

Saline. Partaking of the properties of salt.

Syncope. Fainting with paleness and coldness.

Thermometer. An instrument to show the degree of heat.

A BRIEF SKETCH,

OF

The Anatomy of the Human Body.

THE illustrious BELL, has ingeniously compared the anatomy of the human body to a circle; with this view of the subject, it is not material at what point we set out, for on tracing the various assemblage of the parts equally dependant on each other, we arrive at the place of embarkation. It being equally convenient to commence with the skin, as it first presents itself to view, and envelops the whole animal system, and in a measure, characterizes the human being.

According to the most modern Anatomists, the skin is composed of four *lamanae* or folds: viz. the cuticle or scarf skin; mucous body, or *reticular tissue*; *cutis vera*, or true skin; and from this, there is separated a vascular membrane, which is its organized surface. The cuticle or outside is wholly insensible, and serves to shield the extreme nerves from irritation, and is that part which is removed by the application of blisters. The mucus body or second coat is net-like, transparent, and gives to the body the different shades and colours, from the European to the African; it is subject to disease and changes, altering sensibly the colour, acquiring a considerable degree of acrimony, thereby deranging the excretory vessels, and gives rise to many cutaneous diseases, such as the leprosy, scald head &c. The *cutis vera*, or third layer, is a fibrous membrane of considerable strength, endowed with the nicest sensibility, and is furnished with nerves terminating more minutely than any microscope can reach, and serves in some measure, to give strength to the muscles. The inner layer or fourth coat is connected with the more firm parts of the skin, being a tissue of vessels serving as a support, but its particular office and organization has not been distinctly explained. The

skin, carried over the whole surface of the body, serving as a shield, and is supplied with necessary function for carrying on the important process of sensible and insensible perspiration, which may with propriety be considered one of the most important processes in the regulation of the living being : as, through this medium are removed all excrementitious substances as they become deleterious by decomposition.

Having given a concise, but general description of the skin, it is considered proper to trace the muscles, as they stand next in connection. Every portion of flesh is called a muscle, which has its origin, insertion, and termination in some bone, through the medium of the *periosteum*. Many of the large muscles terminate in tendons, which increase their strength, but have no power of themselves, and are acted upon only by the muscles, which are made up of fibres, the distribution of which varies the moving power of the muscles ; some are adapted to strength, others to motion ; those with long straight fibres constitute the strength, while those running more obliquely give velocity. The first are called *rectilineal* and the latter *penniform* muscles.—What is singular in the muscular power, is, that they lose the principal part of their strength immediately after death.

The illustrious BELL justly supposes the muscular power to be derived wholly from the nervous system.—The whole muscular system has a sheath or covering, giving great strength to particular parts ; in the thigh for example, it is called the *cellular membrane*, but where it acts as a brace, Anatomists have given it the name *Fascia*, where it passes over bones, or where tendons come in contact, it is much thicker & secretes a fluid, lubricating & soothing the parts.

Having passed briefly over those muscles that are under the influence of the will, a few remarks on the involuntary muscles, will close our enquiries on this head. Of these the heart and diaphragm are the principal.

The heart is a muscular organ lying principally on the left side, and beats from the first formation of the *punctum Salens*, (the first moving principle in the germ,) to the close of life. The diaphragm is the principle agent in respiration, which, by setting into the abdomen aided by the expansion of the ribs, produces a vacuum,

A few observations concerning the arteries come next in course. In order to get a clear understanding of them, it will be necessary to be more minute in the description of the heart, which is a strong hollow viscus, with four cavities called ventricles and auricles, two of each; the auricles are more shoal, being sack-like appendages to this organ. Between the auricles and ventricles is a valve or flap which suffers the blood to pass into the heart, but prevents its return. From the right ventricle arises an artery called the pulmonary artery, which enters the lungs and branches, into innumerable small ramifications, & supplies every part with blood. From the left ventricle, arises the great artery which conveys the blood through the whole body, called the aorta, it passes up the spinal marrow and gives off branches to supply the head, neck, and arms, and then turns downwards, and passes along the left side of the spine until it reaches the pelvis where it gives off many branches to nourish the whole abdominal viscera, pelvis, thighs and legs; each branch divides as it passes towards the extremities into innumerable ramifications until they terminate minutely on the surface. The veins take their rise from the termination of the arteries, increase in size as they progress towards the vena cava, which terminates in the right auricle of the heart. The veins are much more numerous than the arteries, and according to the best Anatomical writers, contain three fourths of the blood; they are situated more superficially, have less strength, and carry the blood up in most instances, hence the necessity of valves with which they are furnished.

Our enquiries will next be directed to the bones, as forming in a measure, the *structure* of the human subject.—Anatomists have made different arrangements in the division of the skeleton; but it may probably be examined with equal convenience under three prominent particulars, viz: the head, the trunk, and the extremities. The bones forming the skull-cap are eight in number; the frontal forming the forehead: the two parietal bones forming the sides of the head: the occiput forming the back part of the head, and attached to the neck: the temporal bones situate on each side and forming the temples: the ethmoidal bone is small and square, and divides the hollow of the nose from the cavity of the skull; it is perforated by the olfac-

tery nerves giving it a seive like appearance, from which it derives its name; the sphenoridal bone is not so particularly described. The bones are joined together with *sutures*, so called, from the bones being dove-tailed into each other.

The *coronal suture* passes across the head to each ear, and joins the *parietal* bones to the *frontal*.

The *lambdoidal suture* runs from behind one ear over the head to the other, and in form resembles the letter V.

The *sagittal suture* extends from the *lambdoidal suture* to the coronal, confining the *parietal* bones together.

The *temporal sutures* connect the *temporal*, *frontal*, *parietal* and *occipital* bones.

Having described the principal sutures, which in connection with several others, confine the bones together, and shield the brain and its appendages from external injuries equally as well as one solid box of bones. The only advantage resulting from this division is to aid parturition, which in their infant and cartiliginous state, by a continued pressure pass by each other, thereby lessening the volume of the head.

At the junction of the frontal and parietal bones, a space remains for a few years, called the *fontanella*, which sometimes under certain diseases dilates to a considerable extent. The bones of the head are perforated with many holes which serves as a passage for the *medulla spinalis* nerves and vessels, required to carry on the grand mechanism.

The bones of the face are something numerous forming the upper jaw and nose; a minute description of which, would be wholly uninteresting to the reader.

The form and use of the under jaw is familiar to all, therefore requires no description.

The jaws have sixteen teeth each, the four front or fore teeth in either jaw are called *incisores*, the two next *canine*, the residue are called *molaries*, the four last of which assume the name of *dentes sapientiæ*, in consequence of their not appearing until years of discretion.

The bones of the neck are seven in number, (the two first of which are called *atlas* and *dentalia*, and are peculiar for giving easy motion to the head.) Those of the back are twelve in number, possessing great strength and elasticity, and are connected with the ribs through its whole

course, and it has a considerable channel which is occupied by the medulla spinalis, (spinal marrow.) Between the vertebra there is a cartilaginous substance very elastic, yielding to almost any motion of the body accomodating itself to any position, which by long continued contraction on one side, and an enlargement on the other, produces deformity, as may be noticed in what is called round shouldered persons.

It is evident that by a continued pressure during the day, a person is about an inch shorter than in the morning after a quiet repose.

The *sternum* or breast bone is composed of eight pieces in infancy, but in manhood there is but three, and frequently in old age the cartilages become ossified, and the sternum is one entire bone. The *clavicula* or collar bone is connected with the upper part of the sternum. The ribs are twelve on either side, seven are called true ribs in consequence of their being attached to the sternum; the other five are called false ribs, being situate below the sternum, and are not attached to it but are connected by cartilages. All the ribs except the two lowermost, are connected to the bones of the spine at two points, and are immediately concerned in respiration. The sacrum and coxeyx being the termination of the spine forms a part of the pelvis. The sacrum forms the back part of the pelvis being a flat wedge-like bone, to the lower end of which is attached the coxeyx, a small bone composed of a number of pieces turning inward, and gives some support to the parts within the pelvis, it facilitates parturition by straightning, which enlarges the lower aperture, and is the only moveable part of the *pelvis*. In tracing the subject, we must not omit to mention the five bones of the loins, which forms the lower part of the spine, which with the servical or dorsal make twenty-four vertebra. The pelvis has two cavities one on either side called *acetabula* which furnishes a firm socket for the thigh bones; in infancy it consists of several pieces which become solid in riper years. The *illum* is a large flat bone forming the haunch; the *ischium* or hip bone, the part on which we sit, together with the pubis, to which the genitals are attached, all in connection form the *acetabulum* on each side, and with the *sacrum* and *coxeygis* forms

the whole pelvis. The thigh bone called *femur*, is attached to the pelvis by a large knob or head, and is very hard and solid, it has a neck one and a half inch long; its lower, end is more spongy, formed of two knobs called *condyles*, those form the upper part of the knee joint through which several muscles are inserted.

The leg has two bones called the *tibia* and *fibula*; the former of which, is connected with the thigh bone in forming the knee joint. Over the joint is the patella or knee pan, a small flat bone of a triangular form, and plays like a pulley. The fibula is attached to the tibia a little below the knee on the out side. The *tibia* and *fibula* form the ankle joint, the former being the inner, the latter the outer ankle. The foot is formed of seven bones. The *astragalus* is attached to the leg bone in forming the ankle joint. The *os calcis* forms the heel, to which the *tendino achillis* is attached. The other bones of the foot it will not be necessary to describe; I only would remark, that all the toes have three bones except the great toe, which has but two.

Having finished our remarks on the head, trunk and lower limbs, it remains to give a description of the arms and their appendages in the completion of the skeleton.

The *clavicle* which is on each side being attached to the sternum without *capsular ligaments* which attends other joints, there is however interposed between it and the sternum a cartilage serving to facilitate motion, and prevent friction. This bone is nearly round, playing on the sternum and is connected with the *scapula*, or shoulder blade, by ligaments confining in a measure its motion.—The *scapula* is divided by Anatomists into parts; it is a thin flat bone of some considerable dimensions, and is connected to the ribs by strong muscles without impeding its motion. At the upper edge of the *scapula* is a considerable projection, called the *acromion* the office of which is to prevent the *humerus* or shoulder bone from slipping upwards. Below this and nearly attached is the *glenoid* cavity to which is attached the head of the *humerus* by a shallow socket which renders it more exposed to dislocation than any other joint. The *humerus* or upper arm bone is nearly round and smooth with a large head where it is connected with the shoulder blade; at its lower end it has two prominences called *condyles*, which form the upper part of the elbow

joint. The fore arm is composed of two bones called the *radius* and *ulna*. The *radius* is connected to the outer *condyle* of the *humerus* by a round head which gives the arm its rotatory motion, & forms the principal connection with the *carpus* or bones of the wrist. The *ulna* forms a considerable portion of the elbow joint, and is connected with the inner *condyle* of the *humerus* and with a hook like protusion extends round the arm bone, forming a hinge like joint, this is called the *olecranon*, and is subject to injury. The wrist is composed of eight bones called *metacarpal*, five in number; the fingers consist of three bones each, the thumb but two, which is not necessary to particularize. Having briefly passed over the description of the bones, the *cartilages* stand next in order.

Cartilages, or gristle, cover the knobs or heads of bones at the joints almost insensible, smooth and peculiarly calculated to facilitate motion with producing friction. The *cartilages* have no preceptable blood vessel in an adult. *Cartilages* form the whole skeleton of the *fetus*, which are gradually ossified by the deposition of the phosphate of lime, & become harder, which tends to impede motion in old age. Up to the twentieth year the *cartilages* forming each end of the bones, will separate from it by being macerated in water. Not until that period does the skeleton arrive at perfection; and most nations have agreed man shall be independant, or be of age at the twenty-first year. The whole skeleton is covered with a membrane called the *peritoneum* except on the head where it has received the name of *pericraneum*, this strong membranous substance attached to the circumference of the joints, forms a strong covering called the *capsule* answering the double purpose of confining the *synovia*, and preventing dislocation, here it assumes the name of *ligament*.

OF THE BRAIN.

THE brain is a pulp like substance, of much greater dimensions in the human subject than in animals; and is nicely encircled in its larger divisions by a firm membrane called the *Dura Mater*; its more minute divisions are enclosed in a fine delicate membrane called the *Pia Mater*, these divisions are called *Ventricles*, and are filled with wa-

ter in dropsies of the head. Anatomists divide the brain into several parts, the *Cerebrum* composed of two lobes, occupies the fore part of the head; the *Cerebellum* and *Madulla Oblongata*, the back part being the smaller portion. The *Madulla Spinalis* or spinal marrow and the nerves are an elongation of the brain, similar in principle, but of different consistence, being more firm and dense in the spinal marrow than in the brain, still more so in the nerves. The brain is composed of two parts, called the *Cortical* and *Madullary*; from the latter, the nerves have their origin; they are small white cord like substances, surrounded with a membrane simular to that which envelopes the brain, and is supplied with blood vessels in their distribution through the system; they are forty on either side, nine pair of which arise from the brain properly so called, and thirty one from the spinal marrow; one pair arising from the upper part of the spine passes through the head, has led some Anatomists to conclude that it had its origin there. The nerves have a general connection often forming knobs called *Ganglions*, and other collections of a net like form called *Plexus*. A particular designation of all the nerves and their use would be tedious and uninteresting. The nerves of the senses are the following: the *Olfactory* supplying the organs of smell; the *Optic*, that of sight or vision, the *Audatory* for that of hearing, the *Gustatory* for tasting and the cutaneous for the touch or feeling, terminating in a soft pulp like matter.

OF CIRCULATION.

By the term circulation, is understood, that motion by which the blood is carried to all parts of the body by the arteries, and returned by the veins; the uses of this circulatory motion are the following: first to expose the blood changed by being mixed with chyle and lymph, to the air in the lungs through the medium of *Respiration*; second, to convey it to the several viscera in which it passes through different processes of purification by the *Secretions*; third, to distribute it to all the organs whose growth it continues, and whose wastes it is to supply by the nutritive and animalized part of the blood brought into a state of perfection by the successsive processes of *Nutrition*. The

blood from the whole system is returned to the *vena cava*, where it meets with the chyle from the *thoracic duct*, enters the right *Auricle* of the heart, and by its peculiar stimulus, causes it to dilate until it is filled, then suddenly contracts, and sends the blood forward into the right ventricle, (a valve prevents its return,) the ventricle by the same stimulus dilates and contracts in like manner, and forces the blood into the pulmonary arteries, which carries it into the lungs, through innumerable small ramifications, passes from the numberless arterial extremities to the *Pulmonary veins*, which decrease in number until they unite in one great vein, called the pulmonary vein, which enters the left *Auricle* of the heart, and then passes into the left ventricle, from thence into the *Aorta* and is circulated through every part of the system. It may be proper to remark that the blood in traversing the lungs undergoes a great change by disengaging *Carbon*, detrimental to health, and absorbing *Oxygen*, the living principle, which is clearly demonstrated by the florid red colour, the arterial blood assumes. The blood in its course passes through every part, supplies every glandular secretion, and excretion, (except the alvine,) each gland or vessel taking a certain property peculiar to itself, some consisting of fluids calculated to aid in the important process of nutrition, others to carry off worn out and excrementitious substances which have become deleterious by decomposition.

OF THE BLOOD.

ANATOMISTS have considered it as being composed of three parts, called the *Crassamentum*, *Serum*, and red *Globules*, it varies considerably in colour and temperature in the different vessels, being darker and of a less elevation of temperature in the veins. It is found by chemical analysis to be composed of water, albumen, muriate of potash and soda, fibrin, iron and colouring matter, with traces of some other substances; it has a saltish taste, considerable odour, readily coagulates in an elevation of temperature, its specific gravity a little more than that of water.

OF THE VISCERA.

UNDER this head will be included all the organs of the chest, abdomen and pelvis, with their appendages. The

Thorax or chest is that part situate between the neck and diaphragm, or midriff and contains the heart lungs, mediastinum, pericardium, pleura, the thoracic duct and great blood vessels. The heart is a strong fibrous substance of a conical figure, enclosed in a firm sack like membrane called the *Pericardium*, its use and structure has been described. The lungs which consist of two lobes and these are divided again into several smaller lobules. Besides the blood vessels already described, they are furnished with air vessels called the *Bronchæ*, being extremely fine ramifications in the lungs they increase in size, and lessen in number until they terminate in the *Trachæ* or windpipe which ends in a small opening called the *Glottis*, in the back part of the mouth. Over the *Glottis* is a flap or lid called the *Epiglottis*, calculated to prevent food or drink from entering the trachea over which it passes during deglutition, (swallowing) and such is the wonderful mechanism that difficulties rarely occur. The whole chest is lined with a fine membrane of great sensibility, called the *Pleura*, being the seat of a disease which has received the name of the pleurisy; it has also a double membrane, called the *Mediastinum*, which separates the two great portions of the lungs. The thoracic duct, or great chyliferous vessel, and great blood vessels have their origin in the chest.

OF THE PRIMAVIA, OR FIRST PASSAGES.

This term comprehends the whole digestive tube. First of the mouth where food, intended to nourish the body, is received, to undergo mastication, (chewing) and in salivation from the adjacent glands. It then passes into the œsophagus, through the pharynx, and from thence to the stomach, there to undergo digestion by being mixed with the gastric juice, a powerful solvent which reduces it to a pulp-like mass, called *Chyme*, which is then conveyed through the *Pylorus*, (which is furnished with a valve) into the intestine *Duodenum*, where it meets with the *Bile and Pancreatic juice*, which further dissolve and produce a separation of the nutritive parts, called *Chyle*, from the excrementitious. The mass then passes into the *Jejunum and Illcum* or small intestines, which are supplied with a great number of absorbents, called *Lacteals*, whose office it is to take up the

chyle or nourishing part of the food, and convey it into the misentary glands, and from thence through the thoracick duct to the blood. The excrementitious parts, together with a small remaining portion of chyle is conveyed into the *Colon* which is furnished with a much less number of absortments. This portion of the intestines has a second attached to its side, called *Cæcum*, which is a mear blind appendage, which in connexion, form the large intestines, being peculiarly calculated on account of their size to retain the feculent matter, without inconvenience, for a considerable time, which is peculiar to the human species. After passing the valve of the colon it goes into the rectum, the last portion of the intestines, the passage of which is commanded by the spincter muscles of the anus, which is in some measure under the influence of the will.

OF THE LIVER.

This is the largest of all the glands, of the system; and is distinguished by the peculiar circumstance of being traversed both with venous and arterial blood. It occupies the right side of the abdomen and is attached to the diaphragm, with which it moves, whose office it is to secrete the bile from the blood, which is one of the most important ingredients in digestion, and is conveyed to the duodnum, through the orifice of the *Ductus Choledochus*, communis (or billary duct) after being deposited in a membranous bag, called *Vesicula Fellis*, in consequence of its being almost constantly filled with bile, which is a peculiar fluid of a greenish colour, and bitter taste. The bile is found by chemical experiments, to consist of water, albumin, pichromel, soda, phosphate of lime, common salt, phosphate of soda, and lime; and is one of the most powerful solvent and anticeptic properties in nature.

The Pancreas or sweet bread, is situate transversely in the abdomen, between the stomach and vertebra; of a granulous structure, bearing some analogy to the salivary glands. It has an excretory duct which enters the duodenum. This canal arises from a great number of radicals, which joins it like the feathers of a quill; its size increases as they approach the large end of the pancreas. The combination of the pancreatic and billary fluids, mixing with the chyme in

the intestine duodenum, penetrates it, and renders it fluid animalizes, and separates the nutritious, from the excrementitious parts, and precipitates the chyle. In bringing about this separation, the bile divides into two parts; its oily, coloured, and bitter portions pass along with the excrement sheathes and imparts to the intestines the stimulating qualities requisite to keep up the peristaltic motion of the digestive tube. Its albuminous and saline properties combine with the chyle absorbed with it, and returns into the circulation. When the quantity of bile is considerably diminished, either from a turpidity of the liver or an obstruction of the *ductus communis choledochus*, the feces assumes a lighter appearance, and costiveness succeeds in consequence of a lack of the stimulating qualities of its bitter and colouring principle.

OF THE KIDNIES.

The fluid secreted by the kidneys, is more abundant than that secreted by any other gland; being the more aqueous parts of the blood, and entirely excrementitious, requiring immediate expulsion after being deposited in the bladder.—The kidneys are situate in the abdomen on the vertebral column nearly under the liver and spleen; they are supplied with blood from the aorta, by the renal artery, and receive a greater quantity than any other gland, in proportion to their size. The kidneys are covered with a great quantity of fat, they secrete the urine from the blood and is conveyed to the bladder by the ureters which originate in the kidneys.—The bladder is a contractile sac, serving as a receptacle for the urine, which is expelled from the system, through a canal, called the urethra. The urine is found, by chemical analysis, to contain water, urea, a glutinous animal matter, muriate and phosphate of soda and anionia, phosphate of lime and magnesia, phosphorus, uric and benzoic acids.—The urine has a greater tendency to putrefaction than any other fluid, hence the injury the system sustains by its being a long time retained in the bladder. The spleen is situate in the left hypocondrium and attached to the stomach. It having no duct leading from it, can be considered only a preparatory organ. By some physiological experiments, it has been found to be an auxiliary to the liver, which is

proved by the fact, that a removal of it, in which case, imperfect bile was secreted. The abdominal cavity is lined with a sensible membrane, called the *peritoneum*; over the fore part is spread a net like covering, called the *omentum*, which is generally covered with fat.

OF SALIVA.

THE glands concerned in this secretion, are the *paroteds*, situated before the ear, and behind the neck, and the branch of the jaw. The *submaxillary*, is situated below, and on the front of the body of this bone; the *sublingual*, is placed under the tongue: the *paroteds* and *submaxillaries*, have only one excretory duct: the *sublinguals* have several; all of these glands, are formed by the union of granulations, of different forms, and dimensions: they receive a considerable quantity of blood in proportion to their size, and several nerves are conveyed to them from the brain and spinal marrow. This important fluid, serves to moisten and lubricate the mouth, dissolve the masticated food, aid deglutition, and promote digestion.

The chemical properties of the saliva, according to *Berzelius*, are water, mucus, muriate of soda and potash, tartrate of soda, with animal matter and soda.

OF THE GASTRICK JUICE.

THE stomach, receives a greater number of blood vessels in proportion to its volume, than any other organ in its membrano-muscular *parietes*, or folds; which are a little more than the twelfth of an inch in thickness, and secrete the fluid in question. This secretion is the most active, at the instant food is received into the stomach, which excites an irritation of its *parietes*, previously collapsed. When the stomach is empty, very little blood can be received into its vessels, in consequence of their contraction, which will account for an increased secretion during a state of fullness. The gastrick juice, is neither acid nor alkaline; but neutralizes either of those substances in certain quantities: and is one of the most powerful solvents and antisepticks in nature; hence the propriety of its application, to gangrenous and mortified ulcers, cancers, &c. In addition to the

fluid already described, may be noticed the mucus, secreted by the membrane that lines the whole intestinal canal; which lubricates its surface, shields it from irritation, aids its peristaltick motion, and removes excrementitious fluids from the system. A constriction on this membrane, produces irritation, and gives rise to a disease termed dysentary.

OF CUTANEOUS TRANSPIRATION.

By this term, is meant a fluid that is constantly passing through the exhalents, or pores of the skin. This fluid has considerable odour, a saltish acid taste, and has received the term of sensible or insensible perspiration, according to the state of the fluid. In cases of a constriction on the exhalents, (as in fever) the perspirable matter is continued in a volatized state, in consequence of the increased heat of the surface, and is insensible to the naked eye, which has led most medical writers into an erroneous idea, that the perspirable is wholly stopped under a fever. That the reverse is the fact, which will be obvious to every one, on a little reflection: as it is well known, that heat volatilizes liquids, and renders them more inconfineable. During the stage of fever, the temperature of the body is increased, which dissipates the fluids, and they pass off in the form of gas, or volatile vapour, and is called insensible perspiration.—When the exhalents are relaxed, and the temperature of the body diminished, the fluid exuding from the surface condenses, and is rendered perceptible to the eye: it is called sensible perspiration, or sweat. Its chemical properties, (according to *Berzelius*,) are, saliva, osmazome, lactic acid, lactate of soda, and hydrochlorate of potash and soda. The quantity of the perspirable matter under ordinary circumstances, is considered about five eighths of all the substances taken into the body: it is however, increased or diminished by the variations of the urinary secretions.

OF RESPIRATION, OR BREATHING.

By this term, is meant the process of receiving the air into the lungs, and expelling it from them. This process may be regarded as the great moving principle of anima

tion. The blood, which the veins transmit to the heart, and which is from thence conveyed to the lungs, is of a dark colour, low temperature, (only thirty degrees, Reaumur's Thermometer,) and contains a large proportion of serum. The blood, which is returned from the lungs, through the pulmonary veins, to the left side of the heart, and from thence carried to every part of the system by the arteries, to supply all the secretions, is of a forid red colour, warmer by two degrees, coagulates more readily, and contains a much smaller quantity of serum. All these differences, so apparent, arise from the changes the blood has undergone, by coming in contact with the atmospherical air in the lungs.

OF THE ATMOSPHERE.

THE pressure of this fluid upon bodies, is at the rate of fifteen pounds on each square inch of surface; consequently man sustains a pressure of about thirty-six thousand pounds, (his surface being computed at fifteen or sixteen feet;) hence the propriety of cupping glasses, and shielding* plasters, to remove this pressure on diseased parts.—The body, however, resists this pressure, without any inconvenience, (under a healthy standard,) by its being applied equally in all directions.

The air, which was considered a simple substance by the ancients, is found by chemical analysis, to be composed of about seventy-three hundreds of azote, to twenty-seven of oxygen, and one or two of carbonic acid. The proportions of azote and oxygen, are nearly the same under all the different temperatures and elevations, from the equator to the poles, (according to erudiometrical instruments.) Its salubrity, or fitness for respiration, cannot therefore, be owing entirely to the proportion of oxygen, although about twenty hundreds are required to answer the puposes of respiration, yet if the quantity is reduced to ten or twelve parts of an hundred, the system can with difficulty be supported, although the breathing is laborious, and sometimes asphyxia ensues. It is therefore evident, that the lungs are not capable of extracting all the oxygen from the air. From hence, it must be concluded, that the impurity of the atmospherical air, does not arise from a lack of oxygen, but from an excess of carbon.

Mephetic gases, volatilized, putrid, animal and vegetable remains, (the basis of which is carbonic and septic acid gases) constitute the deleterious qualities of the air.— Burning charcoal, (carbon) in a close room, or where a large number of persons are assembled, increases carbonic acid gas, and diminishes oxygen; the former, on account of its specific gravity, settles the most depending part, and renders extinct, any living body, that comes within its envelopes. People, thus collected, also render the air impure by bodily exhalations, which are constantly emanating from the cutaneous vessels in the form of gas, which is again received into the system, by respiration; before it is decomposed by the atmospherical air; often proves the germ of disease.

The quantity of air, received into the lungs of an adult, at each respiration, is estimated, at about forty cubic inches; on examination after expiration, it is found to contain the same quantity of azote; but the oxygen is considerably diminished, and carbonic acid increased in the same proportion; with the addition of a quantity of aqueous vapour, which is produced by the union of oxygen with hydrogen. As oxygen cannot enter into these new combinations, without parting with a portion of its latent caloric; which keeps it in a state of fluidity; this accounts for the increased temperature of arterial, over venous blood.

OF ANIMAL HEAT.

The temperature of the human body, is generally between ninety-eight, and one hundred degree (of Fahrenheit's Thermometer,) and preserves nearly the same degree of warmth, in the frigid, temperate, and torrid zones, in all the variety of seasons. All animal bodies, have a temperature, peculiar to themselves, independent of the atmosphere. Caloric, in a latent state, is combined with all bodies, and is disengaged, or made free, during every change, whether from a gaseous to a liquid, or a liquid to a solid. Animal bodies are a kind of laboratory, in which many different changes are constantly taking place. The blood is constantly receiving supplies of new materials for assimilation & decomposition, through the thoracic duct, arising from the chiliferous vessels; and from the air, through the lungs, and

cutaneous absorption. All these new substances bring with them into the blood, latent caloric, which they hold in combination, and which is disengaged, or made free; during the different changes they undergo from the influence of the organs, through which they pass. Oxygen, which is conveyed to the blood, by means of respiration, has the power of communicating heat, which is disengaged by coming in contact with the venous blood. Combining oxygen with hydrogen, forms water; oxygen coming in contact with carbon, produces carbonic acid gas; both of which pass off by pulmonary and cutaneous transpiration. Gaseous substances, evidently contain the largest quantities of combined caloric, (their elasticity and fluidity, are owing to this principle,) which is disengaged when changed into liquids. This accounts for the increased heat of animals, that have the power of combining their fluids with the greatest quantity of oxygen from the air. A reference to the birds and reptiles, will serve as an elucidation on this head. In the former, whose lungs are spacious, extending into the abdomen, and are connected with some of the large bones, whose respirations are frequent, the blood passes through the system with great velocity, and whose motions are quick, all causes, in connexion, account for their increased temperature, which is many degrees over that of man.—Reptiles, on the contrary, with contracted lungs, respiration less frequent, a heart with only one auricle and ventricle, circulation sluggish, are of a very diminished temperature. They have been emphatically stiled the “cold red blooded animals.”

But the great, and principle source of animal heat, is through the medium of the nervous system, by the absorption, secretion, and modification of oxygen, in brain and spinal marrow, which converts it into a peculiar substance, called nervous fluid which is distributed through every part of the system by the nerves, giving heat, sensation, and volition, to the whole animal system. By a section, paralysis, or contusion of a nerve, the part, through which it passes, loses a portion of its heat, sensation, and all volition. The principle reasons, why children are a few degrees warmer than an adult, is, in consequence of the greater dimensions of their lungs and brainular system, in proportion to their size, in connexion with their more fre-

quent respiration, and their increased assimilation, of nutrition. If liquids, changed into solids, disengage heat; as we have clearly shown, by a course analogous reasoning, the conversion of solids into fluids, absorb heat; or what was formerly called producing cold, but this idea, has however, become obsolete, it having been proved, by chemical analysis, that cold is merely an absence of heat; therefore, a positive existence cannot with propriety, be ascribed to a negative being. When a body is surrounded with air, whose temperature is greatly elevated, the conversion of solids into fluids, increase with great rapidity, and pass off by cutaneous and pulmonary transpiration; absorb heat, and thereby preserve the uniform temperature of the body, which suffers no other particular inconvenience, than a diminution of weight.

To shew the falsity, of some modern theorists, who assert, that animal bodies cannot exist in a greater elevation of temperature, than that of blood heat, I will mention the experiments of Blagden and Fordyce of England; and of Duhamel and Tillet of France; whose experiments prove, that the human system is capable of enduring an elevation of temperature, sufficient to bake animal substances.

M. M. Banks and others, having exposed themselves to a heat of two hundred and sixty degrees, Fahrenheit, found their bodies preserved nearly the same degree of temperature: A profuse perspiration was the consequence, which was measurably supplied by drinking freely. Franklin, to whom science is much indebted, for many useful discoveries, and ingenious observations, was the first, who discovered the reason why animal bodies would resist so strong a heat. He showed the cause to be, cutaneous and pulmonary transpiration. Many other experiments have been tried, with similar results, which are unnecessary to enumerate.

Recapitulation.

It is obvious, from the arguments adduced, and the experiments quoted, that the absorption, secretion, and modification of oxygen, in the brainular system, and the conversion of gases into fluids, and fluids into solids, are what enable animal bodies to resist the rigorous atmosphere of the polar regions, and preserve their natural temperature. And

the conversion of solids into fluids, and fluids into gases, or the absorption of heat, is the cause, why animal bodies will endure so great an elevation of temperature, and retain their natural warmth.

OF THE ORGANS OF SIGHT.

THE eye, is encircled with different layers, called coats, the outer of which is called the *sclerotick coat*, of a strong texture, and surrounds the eye, except a small part in front : it terminates in a circular opening before, and into this opening, there is a circular transparent coat inserted, called the *cornea*, this resembles the chrystal, set in a watch.— Over these coats are spread a thin membrane, containing a great number of veins, which become inflamed in some diseases of the eye. The hallow globe, which is filled with fluids, is divided into two chambers, called the *anterior* and *posterior chambers*. This partition is called the *iris*, & is that part which gives colour to the eye, as the black, blue, &c : through this coat is a round hole, called the *pupil*. The *iris* possesses the power of contracting under a strong light, which reduces the pupil to a small size, to defend the nerve from too great an irritation ; it also, has the power of expanding in a feeble light, that more rays may be collected, and operate on the optic nerve. The contraction and expansion of the *iris*, is greater in some animals, (the cat,) than in man, this enables them to discover less luminous bodies in the night. Behind, and attached to the *iris*, are the *chrystalline lens*, resembling the glass of a spectacle, (the seat of cataracts.) The jelly like substance of the *anterior chamber*, is called the *aqueous chrystalline*, and *vitreous humours*. Immediately in connection with the *vitreous humour*, and on the inner side of the bottom of the eye, is a pulp like expansion of the optic nerve, called the *retina*.

In explaining the manner in which light operates on the optic nerve, it will be necessary to make some observations on light. The rays of this fluid, moves with great velocity, passing through a distance of seventy-two leagues in one second. According to the calculations of Roemer, and the tables of Cassini, it traverses in something less than eight minutes, thirty three millions of leagues, the distance of the sun from the earth. The rays of light move in direct

lines, and when they pass through a rarer to a denser body, form an angle, striking towards the centre ; the reverse, when they pass from a dense to a rarer body. If the transparent body, is of a regular shape, (as a spectacle-glass, for example ;) the rays strike on, and in passing out of a convex surface, they incline to a point, and form a focus, which will be at a greater or less distance, according to its convexity. The *cornea* being convex, the water being denser than the air, and the chrystalline lens, and *vitreous humours*, still more dense ; the rays of light are brought to a focus on the nerve, at the bottom of the eye, and thus, the image of the object conveyed to the mind. If the lens of the eye are not sufficiently convex, or the *humours* too thin, the rays of light will strike the *retina* before a focus is formed, which gives a very imperfect impression on the object before us, as in old people ; which is remedied by convex glasses. If the lens of the eye are too convex, concave glasses are required, to spread the rays, before entering the eye, thereby carrying the focus to the *retina* ; hence the importance of concave glasses for near sighted people.

OF THE ORGANS OF HEARING.

SOUND is not like light, a body having a distinct existence ; the name of sound is given to a sensation experienced whenever the vibration of any elastic substance strikes the ear. When a sonorous body is struck, a tremulous motion is communicated to bodies applied to its surface. The air which surrounds the sonorous body, (thus struck,) receives and transmits its vibrations with more effect, in consequence of its greater elasticity. The external ear, owes its structure to cartilages : and is ingeniously adapted to the purpose of collecting sound, and its internal parts are defended from accidents, by the secretion of *semen*, (wax,) and by hair, which prevents insects, or dust, from entering. From the internal ear, a passage communicates with the mouth, called the *eustachian tube*, which is subservient to hearing. The auditory nerves are deeply seated, and present a soft pulp like gelatinous fluid, contained in a thin membranous cavity.

OF THE ORGANS OF SMELL.

THE *nasal fossæ*, within which this organ is situated, has two cavities in the depth of the face, and extend backwards into other cavities, called *frontal*, *ethmoidal*, *spenoidal*, *palatine* and *maxillary sinuses*. A thick mucus membrane: always moist, in the tissue of which, the *olfactory*, and a considerable number of other nerves and vessels, are distributed. This membrane, called *pituitary*, is soft and spongy, and is the organ which secretes the mucus of the nose.—The smell appears more delicate in proportion to the capacity of the *nasal fossæ*. This organ seems destined to inform us with regard to the composition of bodies, more particularly of those used for food. Generally speaking, a substance emitting a disagreeable odour, is of little value for nourishment. A particular description of the other senses, would lead to no particular improvement of the understanding, as it is well known that taste, is confined to the mouth, and principally to the tongue; the sense of touch, or feeling, exists throughout every part of the system, but is more nice, and in greater perfection in the fingers. The organs by which they operate, are a pulpy termination of the nerves which rise up in little points, called *papillæ*.

OF EXERCISE.

As life is nothing but motion, it would follow as a matter of course, that exercise properly regulated, and distributed, would contribute much to the perpetuity of this motion.—Exercise is one of the great physicians of nature; life without, it would be feeble, painful, and would soon become extinct. How happily has nature combined health with exercise; that which serves to regulate all the functions of the body, procures it a support. Notwithstanding the general agreement amongst all classes of society, on the salutary effects of exercise, even from the earliest periods of antiquity; yet most people wish to avoid it. Laborious exercise, modified with discretion, increases the circulation; the lungs expand & dilate more freely, which enables the salubrious air to impart more oxygen to the system, giving energy to the nerve, increasing the assimilation of food, converting fluids into solids, and thereby disengaging heat, and caus-

ing a crimson glowing colour, one of the principle constituents of beauty. Exercise, in order to be useful, must not be excessive, but regular and constant, though not immediately after meals. Half an hour should be set aside at each meal, where circumstances will admit, for the digestive organs to desolve the food. It having been proved by an experiment on two animals, fed at the same, with the same kind of food, in equal quantities. One of these animals was kept in violent motion for several hours, the other perfect still. They were killed at the same time : and it was found on examination, that the food of the one kept in motion, was very little changed, while the food of the other was perfectly dissolved, and passed into the intestines.— Moderate exercise, however, does not materially retard digestion, but should be quite moderate, especially with the delicate and dispeptic habits. Exercise on horse back, is the best calculated to give a general circulation to all the fluids of the system ; those persons that cannot bear this kind of motion, should have recourse to carriages, in which they should exercise more freely. As this subject will claim some attention, while treating of some particular diseases ; further remarks will be omitted in this place.

OF SLEEP.

As people of temperate habits, generally enjoy uninterrupted sleep ; few remarks will be required on this head. Many people spend too much of their time in bed ; six or eight hours, out of twenty-four, of quiet sleep, are sufficient to restore to the nervous system, all the tone and energy that can be derived from that source, (children excepted,) who should be indulged in as much sleep as they desire, until about the seventh or eighth year, when a little restriction may be necessary. They should retire to bed early, and rise with the family, at an early hour. Regularity should be particularly observed at all times, in regard to sleep, as one of the great sources of health ; which should be enjoyed in spacious rooms, with a suitable proportion of covering, adapted to the weather. Beds for summer's use, should be composed of chaff, straw, husks, often exposed to the air, with linen covering, and frequent-

ly changed. Persons, in order to enjoy uninterrupted sleep: should retire to bed with a reasonable proportion of nourishing food in their stomachs, that is easy of digestion, to stimulate the brain to a discharge of its functions. Retiring to bed languid, an irritation of the parietes of the stomach is produced, occasioning the sensation of hunger; sleep is disturbed by dreams and imaginations. Similar effects are produced by full meals of indigestible substances, which oppress the stomach, and produce restlessness. Intense thinking, grief, angry passions, and great anxiety, are all unfriendly to sleep. The evening should be ushered in, with a suitable degree of mirth and festivity: which produces a relaxation of the mind. Pleasantry and concord, all lead to sound sleep. Under ordinary circumstances sleeping in the day time, and in the usual wearing apparel should be avoided.

OF CLOTHING.

The principle object of clothing, is to preserve a suitable degree of warmth, to render the body comfortable.—The articles selected for this purpose, therefore, should vary, according to the season. In the more cool parts, our clothing should consist of such materials, as are bad conductors of heat; among these articles, wool should be selected, as, claiming the preference. Of this article, therefore, our clothing should be made, for winter. Sufficient quantities only should be used, to preserve a natural warmth, of the body, which ought to be applied, so as to give free circulation to all the fluids. The changes should vary according to the temperature of the air, but we should rather err, on the side of warmth, than otherwise. The change should be gradual on the approach of warm weather in the spring. Linen constitutes the best clothing in the warmer part of the season, for the healthy youth & the laborious, in consequence of its being less susceptible of absorbing the bodily exhalations, than other articles, of which our clothing is generally made. But the aged, and the weakly, delicate female, should wear flannel next the skin, to preserve a natural warmth of the surface, which keeps the exhalents, pliant and healthy, so serviceable to health. Clothes should be often changed and cleansed from the fluids with which

they are constantly impregnated, from the cutaneous vessels. Children are materially injured by too many clothes, as the temperature of their bodies, is a few degrees above that of an adult, consequently less clothing is required.

The great desideratum in clothing, consists in its being clean, loose, and in sufficient quantities to render the body perfectly comfortable.

The injury, young females sustain, by tight lacing, must be obvious to all. By compressing the abdomen and chest, the lungs cannot sufficiently expand, to receive a sufficient quantity of oxygen, to supply the waste of the nervous fluid, and the oxydation of the blood, which relaxes and debilitates the nervous system, renders torpid, the digestive organs, deranges all the secretory and excretory vessels, consequently food is not properly assimilated, fluids become airimonicous, and consumption, clothed in its hideous garb, attends the subject into dissolution.

OF ALIMENT.

By the term aliment, is meant those substances that are susceptible of assimilation and decomposition, through the medium of the digestive apparatus of organized beings, and of being converted into their own substance to continue the growth, and supply the wastes of the system. All alimentary substances, whether derived from the animal or vegetable kingdoms, may be resolved into a few simple elements, the principles of which are, nitrogen, carbon, oxygen, hydrogen lime, phosphorus and sulphur. The great variety of elementary substances, so manifest on the face of nature, are owing to the variable proportions of these constituent principles. These are the simple bodies that are constantly passing through different processes of purification by vegetable life, which is a kind of laboratory, by which mineral substances (too heterogeneous in their natures, to our own, to admit of assimilation,) are converted into nutrition; which by reception, assimilation, decomposition and expulsion, through the functions of the animal system, continues its growth, and supplies its wastes. Although animal substances, contain all the proximate principle, of our own bodies, they must undergo a series of changes, to become vegetable aliment when assumed as food. By the structure

of the human body, and experience, prove that they are destined by nature, to derive their support from both kingdoms. It is however, obvious, that animal substances are more nutritious, easier of digestion : at the same time more stimulating, and have a greater tendency to putrefaction than vegetable, which renders it improper for the whole of our daily aliment, which has been proved in a great variety of instances, among sailors, soldiers, &c. ; who by a long and exclusive use of animal food, are over stimulated; which exhausts the excitability of the system, impairs digestion, renders torpid all the secretory and excretory vessels, and gives rise to scurvy & other cutaneous diseases. Vegetable aliment on the other hand, has a great tendency to acidity, more difficult of digestion, less nutritious, and less susceptible of producing irritation : hence the necessity of the greater capacity of the digestive apparatus of herbivorous animals. Experience has clearly evinced, that in the human species a due proportion of vegetable and animal food, are more conducive to the perpetuity of the system, than either of those substances separately, as the stimulating and putrescent qualities of the nitrogen, oxygen and hydrogen of the animal, are counteracted by the carbon of the vegetable. The proportions of these alimentary substances however, should vary in different climates and seasons. While the inhabitants of the polar regions devour great quantities of animal food, whose stimulating qualities are required to counterbalance the stupifying influence of the low temperature of the atmosphere ; those of the tropical climates, require the carbon of the vegetable, to neutralize the putrescent and decomposing influence of the rare atmosphere, against the influence of which, they are under the necessity of shielding themselves.— Having briefly made a few general observations on the principles of alimentary substances, we shall make a few general remarks on their different properties; and those of the vegetable kingdom will first claim attention. They are of the following classes, viz.

Farinaceous or mealy aliments :—are wheat, barley, oats, rye, rice, maize or corn, potatoe, sago, pease, beans, &c.

Mucilaginous aliments :—carrots, beetroot, turnips, cabbage pumpkins, melons, asparagus, lettuce, artichoke. &c.

Saccharine or sweet aliments :—sugar, figs, dates, alicorns, &c.

Acidulous or acid aliments :—oranges, gooseberries, strawberries, raspberries, mulberries, peaches, apples, grapes, prunes, sorrel, &c.

Fatty and oily aliments :—cocoa, olive nuts, animal fat, and oils, butter, &c.

Gelatinous aliments :—the tendons, cellular membrane, young animals, &c.

Albuminous aliments :—the brain, nerves, eggs, &c.

Fibrous aliments :—the flesh and blood of different animals, &c.

Caseous aliments :—milk, cheese, &c.

A small portion of the alimentary substances enumerated, are employed as nature presents them, being in that state more nutritious, and easier of assimilation, such as eggs, milk, and a few others; they are however, generally prepared in a manner suitable to the organs of digestion, or the fancy, habit, and fashion of the people.

First, in importance, for the nourishment of the human body, may be placed the *Farinaceous*. Bread constitutes one of the principle articles of diet, and would be much more easy of digestion (when composed of wheat or rye flour,) if only the coarser parts of the bran were removed from it. For doubtless many dyspeptic cases owe their origin to superfine flour. Dough, before it is baked, of whatever kind of flour it is composed, should undergo a peculiar rising, called the panary fermentation. Bread should be thoroughly baked in a moderate heat, and should not be used until several hours old. Puddings composed of corn meal, should be much used. A kind of pudding, called hommany made of corn coarsely ground, and boiled over a slow fire until perfectly soft, furnishes one of the most pleasant and healthy diets combined with milk, probably in nature. By a free use of such diet, with proper exercise and suitable clothing, a disease called rickets, peculiar to children, would be rarely known. Animal food is more nutritious and easier of assimilation than vegetable; but on account of its stimulating qualities and septic tendency, should be used in less quantities, particularly in the warmer parts of the season. The kinds of animal food principally used in the United States, are pork, beef, mutton, poultry

and fish, which are all wholesome, and should constitute a portion of our daily aliment: the fatter parts should be selected for summer's use. Animal food should be combined with vegetable in soups, with a suitable proportion of seasoning, rendered perfectly tender by boiling, & confined as much from the air as possible. Butter, fat and cheese, should be used in small quantities, being difficult of assimilation, and when rancid should be wholly rejected. A suitable proportion of molasses, honey, apple butter, &c. with pickles, composed of beets, potatoes, turnips, &c. well boiled before pickling, all are wholesome, when used in suitable quantities; onions, beans and peas, should be constantly employed, together with potatoes and carrots. It will be proper to remark; that whatever substances are used as food, should be rendered perfectly soft, and their adhesive properties destroyed by cookery, before they are received into the stomach. Condiments should not be very freely used by the youth, and middle aged, more especially in the cooler part of the season: such as horseradish root, mustard seed, pepper, vinegar, &c. but to the convalescent and aged they come in as a necessary stimuli, exciting action of the parietes of the stomach, and give tone to the organs of digestion. A few observations on drink, will close this part of the subject. Water unimpregnated with foreign bodies, is the best beverage for the healthy youth, and middle aged. Spiritous liquors come in as a stimuli, and when used in due proportions, prove an exciting beverage towards restoring the health of the valetudinarian; and may tend to preserve the equilibrium of declining years, by its stimulating qualities on the torpid functions of the system, and sooth its passage down the current of life, by keeping up a general action until the excitement is lost. But when used to excess, it hurries on life by exhausting the excitability, brings on premature old age, destroys the equilibrium, and disease with a train of evils, attend the subject, into desolation. Coffee and tea, in whose favour little can be said, are used in too great quantities, and drank too warm, which debilitate the nervous system, and consequently weaken all the functions of the body. Many of our vegetable productions would furnish a more pleasant beverage, possessing nutritious and cordial properties.— It does not appear consistent with the bounties of Provi-

hence, that amongst the great variety of vegetables that grace our groves and fields, none are sufficient to answer this demand. To assert that exotic plants are more congenial to our natures: better adapted to the preservation of health, does not come with a very good grace from an American. Happy will be the æra when tea and coffee shall be banished from the country: for millions are consumed annually, for this more than useless beverage. A few observations of a general nature, on the foregoing, will close this part of the subject. Serious injuries are sustained by eating too much food at a time; which oppresses the stomach, and retards the progress of digestion; we should therefore, not indulge our appetites to the full extent of their requirements: but eat more frequently. One error I wish to correct prevalent in many parts of society, which is, that exercise immediately after eating a full meal, is necessary to the removal of the oppression in the stomach, which has directly the opposite effect. During digestion, a degree of lassitude is experienced through the whole system; the mind is inactive, and there is a propensity to sleep. Nature seems to concentrate her force to the digestive organs, and in a measure forsakes all others: hence the necessity of quiet repose, that the stomach may be enabled to perform its office without interruption. Digestion is generally better performed during sleep, than any other time in a healthy person, it necessarily follows, that suppers should constitute our fullest meals; which although substantial, should be easy of assimilation, and as much as may be of a simple substance. A variety is both agreeable and healthy, and we may change our diet at every meal if we choose, but avoid different substances at the same meal. More animal food should be used in winter than in summer. All our diet, whether animal or vegetable should be of the best materials; perfectly sound, clear of must, sourness or putrescency. In the warmer part of the season more succulent soft and gentle food, should be used, which will supercede the necessity of much drink, which, when used in large quantities, relaxes and impairs the organs of digestion. Pure water is without taste, colour or smell, and combines readily with soap. This fluid, which contains the greatest proportion of oxygen, of any other known substance, (according to chemical analysis,) is

the most healthy beverage, and should be used in proper quantities, in all our drinks, in its natural state ; to which may be added molasses or sugar, with a little ginger, galen-gal, vinegar, lemon, currant, grape juice, &c. Where water cannot be had in a pure state, fermented beers should be substituted ; the better mode of making it, will be given in another part of the work. Cider, when made of good sound apples, properly fermented, void of all impurities, is an agreeable beverage, and when used in small quantities, make a nutritious stimulant, and may be used by the aged and convalescent ; but should be rejected when it becomes acid.

As men, from the time of Noah, down to the present, have more or less indulged themselves in the excessive use of ardent spirits ; and as a change of habit cannot reasonably be expected : a few hints on the subject may not be altogether inadmissible. Spiritous liquors should never be used in the fore part of the day, at which time the excitability is active and easily excited to the stomach, which has already a sufficient proportion. By this excitement, the stomach suffers from an excess ; while other parts are robbed of a due proportion of excitability, languor and torpidity of the nervous and muscular system, is the consequence. But at the close of the day, after the stomach has become measurably exhausted ; ardent spirits in due proportions, come in as a welcome stimuli, to call from other parts of the system this excitability, so important in the assimilation of food. It must be recollected, however, that no nutrition is imparted, it serves only as a spur, and must be followed immediately with nourishing diet. Before closing this subject, I will remark, that food should always be received when the stomach craves, and the stomach is greatly under the influence of habit, we should therefore accustom ourselves to frequent meals, as it is found that long fasting produces rancid secretions, more particularly of the milk, which is rendered nauseous, and unhealthy ; it is however soon remedied by the digestion of nourishing food. It will follow, that regularity in diet, and that composed of the best materials, should be observed by those that nurse more particularly ; and the convalescent.

These remarks if properly attended to, will be sufficient

for those in health; for the sick, direction will be given in another part of the work.

OF WATER BATHS.

A bath is a large vessel, capable of containing a sufficient quantity of water, to immerse the body; and is denominated differently, according to the different temperatures of the water used in bathing, as cold, tepid (or warm), and hot.

The cold bath, which includes every degree of temperature from the freezing point, up to fifty degrees, of Fah. gives tone to the nervous system, by imparting oxygen, disengaging carbonic acid gas, and caloric, (or matter of heat.) That such is the effect, appears evident from the chemical changes which are necessarily produced by a union of the oxygen of the water, with the carbon of the blood. By its tonic and constricting qualities, it operates powerfully upon the exhalents, the great regulators of the system, and thus presents one of the most important remedies in nature. Indeed, the medicinal virtues of the cold bath, have been known and appreciated from the earliest ages of antiquity. The Ancients used it with marked advantages, in all cases of debility, and nervous affections, and in rheumatisms, consumptions, &c. Through stupidity or ignorance, or, by some other cause, it fell into disuse in the middle ages, but was revived again by the Europeans, who resorted to it out of sheer necessity, as the only available remedy in cases of a relaxed, nervous system, a prevailing disease of the climate. Its salutary effects upon all the internal corroborants, are owing to its immediate action upon the excitability of the system, without the delays usually attending other remedies: hence also its great value in cases of suspended animation. It has been found to contribute materially, to the cure of hydrophobia, the bite of venomous reptiles, agues and fits, when the application is accompanied with proper evacuations of the body. Salt water bathing is very useful in cases of dropsical habits and defective hearing. It is not, however, pretended, that bathing of any kind, is, of itself, a remedy in any of the diseases mentioned. nor will it be found a good auxiliary,

unless the practice be governed by wholesome rules and regulations, such as the following.

First: the cold bath should, in no case, be applied when the system is in a state of exhaustion, by fatigue or otherwise; as such an imprudent use of it, would destroy the remaining excitability: nor should it be resorted to, immediately after meals, when the excitability of the system is in a great measure concentrated in the stomach, which occasions a degree of general lassitude, accompanied sometimes with slight tremors: under these circumstances, the cold bath would exhaust a portion of the excitability of the surface, and by diminishing that of the stomach, would necessarily weaken the powers of digestion. The cold bath should also be avoided, when the surface of the body is quite cool, and the circulation torpid, as under these circumstances, it would dissipate the heat of the body, diminish the excitability of the surface, and thus prevent the desired reaction of the system. From what has been said, it will readily be seen, that the morning is the most auspicious time for cold bathing, after the system has been invigorated by the assimilation of food, and the nervous fluid renovated by sleep and repose; but even then, it should be preceded by some excitement on the surface of the skin, produced by exercise or friction, or by the use of the vapour bath, in order to secure the necessary reaction upon the exhalents and the nervous system.

Another important consideration attending the cold bath, is to adapt its temperature and regulate its duration to the state of the patient. In all debilitated and feeble cases, the bath should be of a medium temperature, and of very short duration, which should be varied according to circumstances, but we should always err on the side of prudence.

As considerable expense and inconvenience attend the water baths, and as they probably claim no preference over the shower bath, the latter should therefore be substituted more particularly in consequence of the convenience of regulating its temperature and quantity: similar regulations should be observed in regard to the application of the shower bath, as are recommended for the water bath.

After the application of the bath, the surface of the body should be rubbed dry, with flannels, and the patient may

retire or dress, as the circumstance of the case, seem to indicate.

OF COOL BATHS.

COOL baths, are those of the variable temperatures, between fifty and seventy degrees of Fah. They may be resorted to when the patient cannot endure the cold bath.

OF WARM BATHS.

WARM baths are of the different temperatures, between ninety-eight, (blood heat,) and seventy degrees of Fah. The efficacy of the warm bath, has been fully demonstrated in all cutaneous diseases, and inveterate chronic complaints, when properly applied. It lubricates the surface, removes constriction, dissolves congealed fluids, and gives tone to the exhalents; also very serviceable in all paralytic and insane cases, parched rough skin, &c.

OF HOT BATHS.

HOT baths are those, whose temperatures are between blood heat, or ninety eight; and one hundred and twenty degrees of Fah. But as they will rarely be resorted to, any further remarks will be omitted.

OF THE VAPOUR BATH.

THE vapour bath claims the preference over the hot water baths, if properly constructed, which should be so arranged, as to have the vapour produced by applying cold water to hot substances, which should come in contact with the surface of the body in a proper receptacle. The importance of applying the vapor that is first dissipated from the water, will be acknowledged, when it is considered that the oxygen, (the principle of animation,) is removed in the greater proportion, while heating; which has been proved by experiments made on fish, which soon suffocate, when placed in water that has been boiled and again cool, which is evidently owing to a lack of oxygen. In order to impress on the minds of the reader, the importance of the baths, I

have thought proper to make an extract from the Domestic Encyclopedia, relative to the baths of the Russians.

“ We allude to the sweating, or vapour bath, which is used by persons of every rank and age, in almost every disorder, before and after a journey, hard work, &c. These are frequented at least once a week, or as often as possible, whether in a state of health or sickness: the extraordinary degree of heat produced by the evaporation of water thrown on hot stones, in a close room raises the thermometer from 146 to 168 degrees, the latter of which number, is a degree of heat considerably above that which melts wax, and only 12 below that for boiling spirits of wine. In such a bath, the Russians lie naked on a bench, and continue there, notwithstanding, a profuse perspiration, sometimes for two hours, occasionally pouring hot water over their bodies; thus some with a view to promote perspiration, and completely open the pores, are first rubbed, and then gently flagellated with leafy branches of birch, while others wash their bodies with cold water, and all of them at length plunge overhead in a large tub of water; many however, rush out almost dissolved in sweat, and either throw themselves immediately from the bath room into adjoining river, or in winter, roll themselves in snow, during the most piercing cold, without suffering any inconvenience, and probably with advantage, for we understand that rheumatisms are scarcely known in Russia, and there is great reason to attribute this exemption from the use of the vapour bath. Indeed, they differ from all *balnea* of antiquity as well as from those of the modern orientals, in the circumstance of not being dry sweating baths, whence their peculiar excellence in many cases, when hot water baths would be inefficacious or even hurtful. By exciting an unusual degree of perspiration, they promote cleanliness, while they render the skin soft and smooth; hence, again, they cannot be compared to the voluptuous baths of the Greeks and Romans, because all the causes of effeminacy and luxury are here completely obviated. From the prejudices imbibed during a soft and effeminate education; this sudden transition from heat to intense cold, appears to us dangerous and unnatural, but it certainly hardens the body of the Russian, and enables him to brave all the vicissitudes of the weather, & all the severities of the climate.”

In order to impress on the mind of the reader the medical properties of this most important of all applications, I beg leave to insert the just observations of the Rev. W. TOOKE, who resided many years among the Russians. "It is not to be doubted that the Russians owe their longevity, their robust state of health, their little disposition to certain mortal diseases, and their happy and cheerful temper, mostly to these baths, though climate, aliment, and habit of living contribute their share. The great Lord Chancellor BACON, and other sagacious observers of nature, and of mankind, have lamented, and certainly not without cause, that this bathing, has fallen into disuse among modern nations of Europe, and justly wish the practice back again, in all our towns and villages. In fact, when we consider that the old physicians so early introduced into their practice this remedy of nature's own invention, and employed it with such great success, when we recollect that Rome for five hundred years together, had no physicians but only their baths; and that to this day a multitude of nations cure almost all their maladies merely by baths; we cannot avoid regarding the dismission of them, as the epoch of a grand revolution, which has been wrought in the physical state of the human race, in our quarter of the world. The natural perspiration the most important of all excretions, must naturally go on better in a body constantly kept soft by bathing. A great number of impurities which privily lay in us, the train to tedious and dangerous distempers are timely removed ere they poison the blood and juices. All exanthematic diseases are abated by bathing, consequently then the small pox; and if this dreadful disorder be actually less fatal in Russia than in other countries, this phenomenon will not be attributed to any other cause than the vapour bath."

OF FERMENTATION.

THE different fermentations, through which substances pass, are five in number, viz: the saccharine or sweet, the vinous, or wine producing, paucary, or bread, the acetic or acid, and the putrefactive, or septic. In the production of these fermentations, certain requisites are necessary; such as nutrition, moisture, heat and atmospherical air.

Of the saccharine Fermentation.—In the production of this fermentation, the seeds (of barley for example,) are exposed to a temperature of 70 degrees of Fah. in an airy situation, (after being sufficiently moistened,) to germinate, and the temperature is continued, until the radicles of the seed shoot about an inch in length; the temperature is then increased to more than one hundred degrees, and continued a sufficient length of time to destroy fermentation, and the insipid amylaceous properties with which the seeds abound, are changed measurably into a saccharine substance. Carbonic acid gas is produced by the union of the oxygen from the air, with the carbon, (the basis of vegetable substances) of the seed, which is disengaged in the process of fermentation, which accounts for the increase of temperature in all fermentations, in the stacking of lime, and maceration, (infusion) of fruit, &c.

In the production of the vinous fermentation, a certain proportion of sugar, water, acid and extract, are requisite with a temperature of about 80 degrees; under the existence of all these circumstances, the substance is rendered more thick; a commotion ensues, carbonic acid gas is disengaged, causing an increase of temperature: during this process the sugar is decomposed, and converted into alcoholic principles, which is in connection with essential oils, acids, extracts and colouring matter. The grape juice is the principle substance used in the production of wine.—The lively sparkling appearance that liquor assumes in pouring it into a glass or vessel, is owing to a retention of a portion of carbonic acid gas, which is the consequence of closing or confining the liquor from the air, previous to the completion of the fermentative process.

In the acetous fermentation, vinous liquors are exposed to a temperature of about 80 degrees of Fah. in contact with the air, which produces intestinal motion, with a slight elevation of temperature, accompanied with a hissing noise, and acrid smell: during this process, the alcohol and malic acid is decomposed, oxygen is absorbed from the atmosphere, and the acid is formed, having deposited a thickropy sediment at the bottom, and the liquor becomes clear.

The panary fermentation is produced by adding a proper quantity of yeast to a paste, made by combining water with flour, and placed in a temperature of 60 or 70 degrees, &c

small quantity of gas is evolved, which measurably destroys its adhesive properties, and is retained by the vicinity of the paste, which swells and becomes light or spongy, and when baked forms bread.

Of Putrefactive Fermentation.—This fermentation, properly speaking, is confined to animal substances, whose base is nitrogen, or azote. The vegetable decomposition, which takes place spontaneously, has, however, some times assumed the name of putrefactive. The most favourable situation to accelerate this fermentation, is to expose the animal substance to a moist atmosphere, with about 80 or 90 degrees of elevation of temperature. In the decomposition of animal substances, oxygen from the atmosphere, combines with the azote, hydrogen and carbon, producing septic acid, hydrogen gas, water and carbonic acid gas; all of which are dissipated in the form of gas and vapour, a most noxious and deleterious substance; and frequently the germ of many of the most malignant diseases.

GENERAL DIRECTIONS,
FOR
THE COLLECTION & PRESERVATION,
OF
VEGETABLE MEDICINE.

IN the selection of such vegetable medicines, as are used in the treatment of disease, a preference should be given to those that grow spontaneously on dry soils, as much exposed to the sun as is consistent with the nature of the substance. As vegetable medicines possess different properties, a variety of preparations are necessary to preserve them in their greatest perfection. The odoriferous plants have their medical properties concentrated in their essential or volatile oils, and are the best preserved by distillation, or where this cannot be conveniently done, the herb should be gathered in dry weather, when in blossom; dried in the shade, a kiln is preferable, as soon as possible, powdered and put into casks and kept from the air. To this class belong all plants that yield an essential oil, such as mints, &c.

The acrimonious and volatile roots that loose by drying, should be dug in dry weather, washed and put into a cool cellar, enclosed in dry sand. To this class belong horse-radish root, indian turnip, &c.

Biennial roots should be collected in the fall, of the first year's growth, or in the spring of the second. To this class belong mullen, burdock, &c.

Perenial roots are preferable when collected in the spring, before the forming bud expands, at which time they possess the most mucilage ; they may be collected in the fall, after the stalk begins to decay. To this class belong the mandrake, golden seal, &c. They should be washed clean, and all decayed parts removed ; they should be dried in a moderate heat, and then confined from the air ; large roots should be cut into slices to prevent their moulding.

Barks of roots, should be collected in the winter, before the sap starts ; and the ross removed from the inner bark, dried, powdered and confined from the air. The barks of bodies of trees should be collected in June, at their last running. Seed should be gathered when fully ripe, before they drop spontaneously ; kept in a loft, expose to the air, and in their natural covering or husks.

OLEA VOLATALIA (*Volatile or Essential Oils:*)

ESSENTIAL oils are extracted from odoriferous substances by distillation ; but they do not yield in proportion to their odour. Rose, camomile flowers, and some few others possessing a strong scent, yield very little, while savin and turpentine whose fragrance is much less, affords the greatest proportion of any vegetable substance. Essential oils possess all the medicinal properties of the substance from which they are taken in the greatest perfection. Thus the stomachick of mint, the nervine of rosemary, the diuretick of juniper, the emmenagogue of savin, the sudorifick of sassafras, the tonick of cinnamon, the carminative of the aromatic seeds, &c. &c., are concentrated in their volatile oils. Most plants afford the greatest quantity of oil when partially dried, they require, however, to be gathered in different stages of their growth ; some give out the greatest quantity of oil at the time their flowers begin to fall, while others yield the most in their young and tender stages. To the latter class belongs sage, rue, & a few few others. Aromatic herbs yield the greatest proportion when cultivated on dry soils, and in warm seasons. The substance to be distilled, should be so prepared that the water can penetrate every particle, and volatilize the oil : wood for example, should be rasped, sawn or shaved thin ; roots

cut into thin slices, barks reduced to a fine powder; seeds gently bruised, but herbs require no preperation; and only a short maceration, (infusion,) before distilled; while the more firm and hard substances require several days or weeks. Soft water is preferable in distillation, and that in which a little salt has been dissolved, to prevent fermentation, and the herb from burning. The quantity of water used, should be in proportion to the moisture contained in the substance; for those that are employed in their green state, about three times their quantity will be required: the heat should be raised very quick, to a sufficient temperature, which should vary according to the substance distilled. Rosemary, marjoram, lavender, and most of the odoriferous plants have their oil much injured by too great a heat. Essential oils possess common properties of pungency, but differ materially in their medicinal qualities, possessing all the virtues of its original substance. The most valuable of these oils, are the following: Thus, the oils of annis, fennel and caraway, are distilled from the seeds; angelica from the seeds and roots; lavender from the flowering spike; juniper from the berries; savin, hemlock, cedar, &c. from the leaves and boughs; sassafras from the body, and barks of the body and roots; spikenard from the roots; peppermint, spearmint, peneroyal, rosemary, marjoram, baum, savory & some few others from the flowering tops and herbs; wintergreen from the vine and leaves; cinnamon from the bark; cloves from the bud; turpentine, (call'd spirits of) from the gummy substance that exude from white-pine trees, and balsam of fir from the boughs and the gummy substance that exudes from the fir tree.—Oils should stand a few days after distillation, lightly covered with paper, to permit the acrimonious odour to pass off; and the oil become limpid; they should then be bottled close, and kept in a cool place. Most of these oils possess too much pungency to be used without being dissolved by some menstrum of which alkohol is the greatest, refined sugar next, mucilage the weakest. Essential oils possess common properties of pungency and irritation, but differ materially in their medicinal qualities, each partaking directly of the virtues of the plant from which they are extracted. One peculiar circumstance attends these substances, which is, that the pungency of these oils bears

no proportion to the plant from which they are taken, while pepper and cloves yield a mild and almost inodorous oil; cinnamon affords a pungent and almost caustic oil. The more pungent oils, are used externally to restore the lost and energy of the nervous system.

OF THE CLASSIFICATION OF VEGETABLE MEDICINES.

As no particular advantage could be derived from a botanical classification of the vegetable productions made use of in the treatment of disease; they will be arranged only according to their medical properties, under the different head to which they belong respectively, with a particular designation of their peculiar qualities. This arrangement will enable the reader to refer immediately to any article required, and to vary their application according to peculiar circumstances. The selection will be found sufficiently extensive to give the reader an opportunity of procuring a sufficiency to answer all the medical demands in the various climates. We admire the economy of nature in the variable productions of vegetable substances in the different climates. While we discover a great variety of anticepticks, stimulating spices and condiments of the tropical climates, calculated to counteract the septic and acetous tendency of animal and vegetable aliment, we witness a profusion of tonicks and astringents in the colder climates, which are calculated to give tone to the digestive organs, increasing the assimilation of nutrition, converting fluids into solids, disengaging heat, and thereby counterbalancing the pressure of the dense atmosphere. In addition to these facts, we have the authority of the immortal RUSH, to whom great deference is due, that every country produces its own medicines, which are better, specifies more congenial to its inhabitants than any foreign substance. In the designation of vegetable Botany, it is considered advisable to give the botanical names, together with the most common names, by which the country people know them. The variety of names by which the same vegetable is designated in different parts of the United States is so great, that it would be difficult to give the reader an idea of what article was meant by the common names only. But by

having the botanical inserted, all difficulties would be removed by referring to botanical treatises; as the names are the same in such publications. As an example of the variety of names by which the same substance is known, I will mention a plant whose botanical name is *hydrastris canadensis*: it was called by the inhabitants of this state, at its first settlement, gall of the earth, ague root, golden seal, &c. In the southern states it was known by the names of yellow root, canker root, yellow puccoon. Dr. THOMSON has given it the name of *Ohio kircuma*, but by what authority I do not know, as it has no more analogy to the *kircuma* of the shops, than it has to *columbo* root, or many other substances. The botanical names will be inserted first, and then all the common names with which we are acquainted, given in italicks. We shall commence with those vegetable substances called emeticks.

OF EMETICKS.

By this term, is meant medicines that are calculated to produce an inverted peristaltick motion of the stomach, which cause a discharge of its contents through the mouth, called vomiting or puking. The only rational object of this class of medicines, is to remove from the stomach some deleterious and offending substance, or some nutritious principle that is not susceptible of being readily dissolved by the gastrick juice, and conveyed through the pylorus into the intestines. As this evacuation of the stomach is contrary to the general law of nature, and is attended with considerable exhaustion of the nervous system, it should be resorted to, only when some deleterious and offending substance is accumulated, or has been deposited in the stomach, consisting of mineral and vegetable poisons, or improper combinations of some of the constituent elementary principles; such as oxygen with nitrogen, which produces septic acid: or oxygen with carbon which produces carbonic acid gas, which are offending deleterious substances, and should be removed when in excess, by emeticks; also, when large quantities of indigestible substances which the gastrick juice cannot dissolve down, such as the epidermis, (*skins*) of fruits, conculable substances, &c.

The doctrine propagated by some recent writers on medicine, that a quantity of cold jelly, (to quote their own expression,) is constantly accumulating in the stomach under diseases, is preposterous and unfounded. As it is well known to every person that has the smallest acquaintance with the anatomy of the human system, and of common sense, that no other secretory vessels exist that deposit their fluids in the stomach, except its mucous membrane, or parietes, which secrete the gastrick juice, one of the most powerful solvents in nature: and is the principle of digestion. These secretions like all others, are subject to derangement and disease, but the propriety of constantly evacuating this fluid by emeticks, requires considerable philosophy to explain. The only particular benefits that can be derived from the use of emeticks (after one or two evacuations in the most malignant case,) is to excite a general action of the glandular secretions, and excretions, particularly of the exhalents, which can be produced without so great an exhaustion.

LOBELIA INFLATA, (*Indian Tobacco.*) The seeds and leaves.

THIS is an annual plant, growing from one to two feet high, with numerous branches, bearing single pale blue blossoms, succeeded by small pods, containing very small brown seeds.

Medical properties.—Emetick sudorifick and antispasmodick. The seeds in half tea-spoon doses in powders, or twice the quantity of the powdered leaves in warm water, repeated once in twenty or thirty minutes, relieves paroxisms of the asthma, spasms, and thoroughly evacuates the contents of the stomach, and proves a powerful sudorifick. The better mode of preperation however, is to infuse three ounces of equal quantities of the seeds of lobelia, ipecac, & indian cloves, all made perfectly fine, in one quart of spirits. It is very serviceable in all paraletick cases, torpor of the nervous system, arising from intoxication, or opium.—To be taken in tea-spoon-full doses, and repeated and increased as the necessity of the case demands.

It is an excellent remedy for the croup or rattles, and is rendered more powerful, by combining one fourth of a tea-spoonful of the powders of bloodroot to each dose; also for the thrust or canker in the mouth, combined with equal quantities of the powders of goldenseal. Lobelia should rarely be given alone, on account of its exhausting effects on the nervous system, which renders it less efficacious for the aged and debilitated, more particularly in the warmer climates. It is successfully employed, as an external application in rheumatick pains, inflammations, &c. The lobelia is a powerful sudorifick, which constitutes its principle medicinal qualities. It is said to have been used, with great efficacy in cases of hydrophobia. When this medicine is employed for the asthma, a tea-spoonful of the powder of skunk cabbage root should be added to each dose, & nervines, when given in cases of cramps or spasms. But as it will rarely be found necessary to resort to this class of medicines in the removal of disease, if proper administrations are made at its commencement, any further remarks in this place will be unnecessary.*

CEPHALIS IPECACUANHA, (*Indian Physic.*)

THIS plant is produced on the borders of the Ohio river and in the Southern States. It grows about two feet high, has a slender stalk, with deep indented leaves, and bears small white blossoms. The root is about the size of a pipe stem, and two or three inches long, tapering to a point, and is often bent short, when broken, a milky substance exudes from it of a very bitter, nauseous taste.

Medical Properties.—Emetick, Cathartick, Sudorifick, Tonick, and Anticeptick. The powdered root in doses of one or two teaspoonsfull, proves an emetick and sudorifick. The same quantity in small doses, and repeated once in thirty or forty minutes, acts as a cathartick and gentle diaphoretick. When administered in one fourth teaspoonfull

*Dr. Thompson claims the honor of introducing this article into particular notice as medicine, and has obtained a patent for the exclusive use of this article, in cleansing the stomach, overpowering the cold and promoting a free perspiration.

doses it acts as a tonic, by promoting a secretion of the gastric juice and aids digestion.

It is very serviceable in intermittants, (agues,) in half tablespoonfull doses, with ten drops of the oil of sassafras, in molasses and taken one hour before the paroxysm. It is particularly serviceable in small doses combined with mucilages in all dispeptic cases, and costive habits; and for the dysentery, and piles, applied as a lavement in large quantities. It stays hemorrhages when given in small doses to excite a nausea, and promote a general perspiration. The ipecac yields its virtues more readily to watery than alcoholic extracts. Few medicines claim the preference over this in any stage of a disease, on account of its cathartic, sudorific, and tonic properties, three of the most essential qualities of medicines. It may be proper to remark that small doses act as tonic, larger doses evacuate and exhaust the system. The same may be said of all other active medicines.

EUPATORIUM PERFOLIATUM, (*Thorough-wort*, *Bone-set*, *Crosswort*)

THIS plant rises about three feet high, perforating the leaves at each joint. The stalk is of a reddish colour, and branches near the top, bearing light purple blossoms.

Medical Properties.——Emetic, Cathartic, Sudorific, and tonic. The leaves and flowers, in doses of one or two teaspoonsful, to be taken every two or three hours during the intermittent stage of the ague, often removes the disease; it may be taken in watery or alcoholic extracts. It is also given with the happiest effects in small doses, in warm water, and often repeated in all cases of fever. We have the authority of Dr. Barton, of its being administered successfully in cutaneous diseases, of which we can bear testimony. It is also advantageously employed in the forming stages of the different species of dropsies, claiming the preference over common sudorifics and tonics, on account of its diuretic qualities: small doses act as tonics, large doses exhaust.

VERBENA HASTATA, (*Vervain, Blue and White flower-
ed.*) The Herb.

THIS plant grows from two to four feet high, with numerous branches, terminating in long tassels of small white or blue flowers, succeeded by caps containing four long brown seeds of a bitter taste.

Medical Properties.——Emetick, Cathartick, Sudorifick, and Tonick. It may be combined with the eupatorium, as it possesses similar qualities. It is very efficacious in all consumptive cases in teaspoonful doses of the powdered roots, leaves, or seeds. When steeped in warm water and drank freely, proves a powerful emetick, sudorifick and cathartick.

OF CATHARTICKS.

CATHARTICKS are medicines calculated to increase the natural peristaltick motion of the stomach & bowels, by exciting action of their mucous membranes, which serves to remove from the system, vitiated & excrementitious substances, through their natural ducts. Hence their importance in the healing art.

PODOPHYLLUM PELTATUM, (*Mandrake May Apple.*)
The Root.

THIS plant rises about one foot high, dividing at the top into two branches, terminating in large leaves. From the centre of these branches a small stem rises, bearing a white blossom, succeeded by an esculent fruit nearly as large as a hen's egg, of a light, orange colour, of a fragrant smell, & is much admired by some people. The root is about the size of a pipe stem, running horizontally under the ground and is of a yellow brown colour.

Medical Properties.——Cathartick, Emetick, Anticeptick stimulating anthelmintick. This plant ranks the highest of all the articles belonging to this class of medicines. The leaves, however, are drastick: possess no medical properties, and should be wholly rejected. The root of this plant

is peculiarly calculated for a cathartick, extending its influence through every part of the system, touching every gland, when given in small doses and repeated every two or three hours. It is particularly serviceable in all dropsical cases, and intermittents, or in any other disease where a general action is wanting. It is often successfully employed as a vermifuge, (*wormdestroying medicine*,) in tea spoonful doses, and repeated. The recent root bruised, or the dry root in powders, moistened with saliva, vinegar, or a weak solution of alkaline salts, [*pearlash*,] constitutes an excellent application for mortified sores, foul ulcers, gangrenous swellings, cancers, &c. I will remark in regard to this medicine also, that small potions excite a general action, & stimulate the glands to a discharge of respective offices, while large doses evacuate and exhaust the system.—Some pretended botanists have pronounced this root poisonous, but from what authority, is not stated, but it must have been on the authority of ignorance.

JUGLANS CINEREA, [*Butternut, White Walnut.*]

THIS tree, grows to a considerable size, and is produced in most parts of the United States, and is generally known.

Medical Properties.—Cathartick, tonick, and stimulant. The better mode of preparation, is to collect the bark in the month of June, at the last running of the sap, when the bark peels, after removing the ross, it should be boiled in a sufficient quantity of water to extract its virtues; then strain the liquor through a thick cloth, and boil it down to the consistency of molasses. It is an excellent cathartick in doses from half to a table spoon-full combined with an equal quantity of the powders of slippery-elm, and a table spoon-full of sale molasses, in all dysenterick cases, costive habits; or in any other case where catharticks are proper: or it may be reduced to a state of pilling, by adding equal quantities of the powders of slippery-elm, and mandrake root, and rolled into pills, the size of common peas; taken on going to bed, in doses from one to four is very serviceable in dispeptic cases, and in torpidity of the bowels &c. It often gives relief in cases of the cholera morbus, sick stomach, or violent vomiting.

SANGUINARIA CANADENSIS, (*Blood Root, Red Puccoon.*) The root.

THIS plant rises early in the spring, about eight inches high, bearing round olive green leaves, and white blossoms. The root is about the size of the little finger, of a dark red colour, and exudes a red juice when broken.

Medical Properties.——Cathartick, emetick, tonick, expectorant, diaphoretick and anticeptick. The powdered root in doses of one fourth of a tea spoonful, with an equal quantity of mandrake root, and one tea spoonful of the powders of slippery-elm, promotes fluid secretions, checks the frequency of the pulse, excites action in the glandular secretions, dissolves phlegm, and promotes its discharge.—A tincture made by filling a bottle half full of the recent root sliced, and adding an equal quantity of spirits, and taken in tea spoonful doses, several times a day, is very efficacious in intermittents [agues,] jaundice, gonorrhoea and dyspepsia. The expressed juice is very serviceable in removing the effects of the bites of venomous reptiles, and cures warts. The powdered root sprinkled in foul ulcers, removes fungous flesh, and snuffed up the nose, removes the polypus. In half tea spoonful doses, often repeated, cures the croup or rattles; combined with three times its quantity of the powdered root of crane's bill, in doses from half to three fourths of a tea spoonful, forms an excellent cough powder, to be taken according to circumstances.

RICINUS COMMUNIS, (*Parnea Christa, Castor Oil.*)

THIS plant is cultivated in gardens and fields, and grows from four to six feet high, with numerous long branches, bearing a bur containing beans, from which the oil is expressed.

Medical properties.——Cathartick mucilaginous and exhausting. The oil operates gently as a cathartick, in table spoonful doses, but is attended with some exhaustion of the nervous system; it can be considered only as a secondary article, and should be used only when other more valuable

medicines cannot be obtained ; its principle value is in dysenterick cases, attended with an obstruction of the duodenum.

OF SUDORIFICKS.

SUDORIFICKS, are medicines that are calculated to act on the exhalents, [pores of the skin,] and remove contriction, promote an increased secretion of perspirable matter, and render it visible. The important rank this class of medicines holds in the healing art, will be duly appreciated when it is considered that through these vessels are removed from the system, worn out and excrementitious substances which have been rendered deleterious by decomposition, [being according to the best experiments, about five eighths of all the substances taken into the system,] which are no longer subservient to the perpetuity of the system, to give place for new and animating principles, which after undergoing the same process of assimilation and decomposition, are in like manner dismissed the service to go again into the common stock of materials, to be reconverted into nutrition by vegetable life.

COCHLEARIA AMORACIA, [*Horseradish.*] The Root.

THIS plant is cultivated in gardens for culinary purposes, and is generally known.

Medical Properties.—Sudorifick, diuretick and diffusible. The recent root scraped fine and infused in cider, or vinegar and water, and taken in tea spoonful doses, and often repeated, produces a general action through the system, particularly on the exhalents. It is particularly serviceable in all cases of torpor of the nervous system, palsies, dropsies scurvies, catarrhs sciatic and rheumatick pains &c. In small doses it excites action of the parietes of the stomach, and promotes digestion. The recent leaves externally applied, removes numbness of limbs, colick, tympany, &c.; applied to the feet relieves pain in the head.

ASCLEPIAS TUBEROSA, [*Butterfly root, Pleurisy root, White root.*]

THIS plant shoots up several stalks about two feet high, bearing beautiful bright orange red flowers, succeeded by slender pods, containing seeds; the roots are white, of a coarse spongy texture, of a carrot shaped, and frequently three inches in circumference.

Medical Properties.—Diaphoretick, antispasmodick, gently laxative, and expectorant. A strong decoction of the root drank freely, or the powdered root in tea spoonful doses, in warm water, and often repeated, removes all febrile symptoms in the forming stage of fever, and promotes a healthy action on the exhalants; it is particularly serviceable in all obstructions of the respiratory organs, pleuretic pains, flatulency, cramps, rheumatick affections, &c. A strong decoction applied in the form of a wash, removes pain, reduces swellings, and stays mortification. The recent root bruised, or the dry root powdered, and moistened with saliva vinegar, or a weak solution of alkaline salts, is an excellent application to gangrenous swellings, and mortified sores and cancers. A strong decoction should be drank freely in all cases and stages of fever, or any other disease.

POLYGALA SENEGA, [*Seneca Snake Root, Rattle Snake Root.*]

THIS plant sends fourth several stalks about one foot high, bearing white blossoms; the root is about the size of the little finger, variously bent, bearing the appearance of joints similar to the end of the tail of a rattle snake.

Medical Properties.—Diaphoretick, diuretick, expectorant and stimulant. The root steeped in a close vessel, and made into a strong infusion, and taken in table spoonful doses, and repeated every half hour, produces a general action on the exhalants removes obstructions, and cures the croup, bite of a rattle snake, and gives great relief in pulmonary complaints, by increasing the circulation, and promoting expectoration; also relieves suppression of the urine.

AMOMUM ZINGIBER, [*Ginger.*] The Root

Medical Properties—Diaphoretick carminative, slightly, astringent, nervine and anticeptick. This is a valuable medicine, and when taken in tea spoonful doses in warm water, and repeated every half hour proves a valuable diaphoretick, and is particularly serviceable in all dysenterick cases, flatulency colick, &c. Its effects are more durable, and less irritating than capsicum, being calculated to give a natural tone to the organs of the system, when combined with one fourth its quantity of mandrake root. It is an excellent ingredient in the mucilaginous poultices. In large quantities steeped in milk often gives great relief in the gout, when taken in sufficient quantities.

GALENGAL, The Root.

THIS is one of the most valuable spices of the tropical climate, and bears a strong analogy to the ginger root, but it possesses more pungency, and its effects are more durable.

Medical properties.—Diaphoretick, antispasmodick, carminative and nervine. Taken in half tea spoonful doses in powders and repeated every half hour, excites a general action on the exhalants, removes febrile symptoms and gives tone to the nervous system. It is particularly efficacious in epileptick and cramp convulsion fits, palsies, spasms, and in all cases of debility.

LAURUS SASSAFRAS, (*Sassafras, the bark of the root, and essential oil.*)

THIS tree sometimes grows to a considerable size, but generally not more than twenty or thirty feet high, and is a production of the Western and Southern States and is generally known.

Medical properties.—Diaphoretick, diuretick and stimulating. A strong infusion of the bark of the root taken freely produces a general action, and is very efficacious in agues, rheumatisms, venereal complaints and obstructions in the urinary organs. The essential oil has a more happy

effect in the above cases, and is very serviceable, when applied to foul ulcers, stiff joints, &c.: also in epileptick fits, in doses from four to six drops on loaf sugar.

CAPSICUM ANNUUM, (*Cayenne Pepper*.) The Pod.

Dr. Adair Makitrick was the first that introduced capsicum into the practice of Medicine. He found it to be useful in *Cachexia Africana* [a morbid disposition of the system; a fatal disease among slaves.] Dr. Wright says, that in dropsical and some other cases, a minute portion of powdered capsicum is an excellent addition, and recommends its use in lethargic affections. This article has been successfully employed in malignant diseases of the tropical climates. It is particularly serviceable in cataplasms in tropical fevers applied to the feet. It produces irritation, but rarely excites blisters. Dr. Adair gave six or eight grains for a dose, in pills or alcoholic extracts by digesting half an ounce of powdered capsicum in one pt of alcohol. Dose two drams diluted with water, [Dispensatory.]*

ARCTIUM LAPPA, (*Burdock, Clot Bur.*) The roots, seeds and leaves.

Medical properties.——Diaphoretick, diuretick, and stimulating. The seeds or root in a strong decoction, taken freely, promotes a general action in the secretory and excretory vessels, particularly of the cutaneous and urinary. It also relieves colick pains and visceral obstructions. The leaves wilted and applied to swellings, disperses them, applied to the feet, relieves pain in the head. The recent root combined with equal parts of dock root and scke leaves, all bruised and moistened with cream, and placed in a moderate heat, for several days, cures the itch.

SALVIA OFFICINALIS, (*Sage*.) The leaves.

Medical properties.——Diaphoretick, stomachic, slightly stimulating, and carminative. A strong infusion of the

*Dr. Thompson has patented Cayenne Pepper for the express purpose of over powering the cold, & promoting a free perspiration.

leaves drank freely, promotes a general action, removes flatulency, aids digestion, and is very serviceable in all debilitated cases of the nervous system. It is far superiour to the tea plant, for a common drink, with a suitable proportion of sugar and milk, and should be drank rather cool, as all hot drinks are relaxing to the nervous system.

SATUREJA HORTENSIS, (*Summer Savory*.) The herb.

Medical properties.—Diaphoretick, stimulating and cordial. A strong infusion of the herb taken freely, gives a general action to the perspiring vessels, and is the most stimulating of the herbs, cultivated in gardens. It yields an essential oil, which is very stimulating, and when applied to a carious tooth on cotton or wool often removes pain.

SANICULA MARILANDICA, [*Black Snake root*,]
Sanicle.

THIS plant sends up several stalks about a foot high with dark green leaves. The root is of a dark brown colour of an aromatick taste.

Medical properties.—Diaphoritick, stimulating cordial and stomachick. A strong infusion of this plant drank freely, removes constriction on the exhalents, and stimulates all the glandular secretions. Few articles claim the preference over this, as a common remedy. Taken on retiring at night removes all obstructions of the glands of the throat, hoarseness, and cures the influenza.

LAURUS BENZOIN, [*Spice-bush*, *fever bush*.]

THIS shrub, or bush grows from eight to twelve feet high, bearing red berries.

Medical properties.—Sudorifick and gently aromatick. A strong infusion of the twigs, barks or berries, taken freely, removes all febrile symptoms in the first stages of fevers, and is a pleasant beverage in all stages of this disease, and contributes much to its removal. The berries are preferable, and should be used freely.

COMPTONIA ASPLNIFOLIA, (*Sweet fern.*) The tops.

THIS bush grows two or three feet high, with numerous branches terminating in brown flowers. It is a production principally of the northern and eastern states.

Medical properties——Diaphoretick, nervine, slightly astringent, and tonic. An infusion of the tops, leaves, or bark, drank freely, produces a general diaphoresis, relieves dysentery, and strengthens the nervous system; and is particularly serviceable in the St. Vitus' dance and rickets. It should be drank for a considerable length of time.

OF TONICKS.

TONICKS are medicines that are calculated to be acted upon, by the nerves of the stomach, and of imparting to the nervous system, a peculiar stimuli, which gives tone and action to the parietes of the stomach, excites a secretion of the gastrick juice, and promotes the assimilation of nutrition, on which rests the support, and in a measure, the perpetuity of the system. The important rank, this class of medicines, holds in the restoration of health, will consequently be duly acknowledged. It may be proper to remark, that this class of medicines is used principally as restoratives.

ARALIA SPINOSA, (*Hercules all heal, ague bark, swamp dogwood.*)

THIS shrub grows from six to eight feet high, bearing some resemblance to an apple tree sprout. The bark of the root is of a light brown colour, thick, and of a very bitter pungent taste.

Medical properties.——The bark of the root possesses tonic, stimulating and gently diaphoretick qualities. It is particularly serviceable, in agues, palsies, epilepsies, or in any case of torpidity of the nervous system. This valuable medicine may be given in all cases, where tonicks are necessary, in doses, from one fourth, to half a tea spoonful of the powdered bark, of the root; claiming the preference

over common tonicks, on account of its pungent and stimulating qualities. The better mode of preparation, however, is to infuse one ounce of the powders in a quart of spirits for a few days, to be taken in table spoonful doses, a little before meals. It will remove all colick pains, in half wine glass full doses, and repeated or increased, according to the circumstances of the case. It is efficaciously administered for cough in table spoonful doses, of the tincture, which is the most proper mode of administering. It should be remarked that doses must be varied according to the age, constitution, and habits, of the patient, beginning with the smallest prescribed doses, and repeated or increased as necessity requires. Cures the rheumatism and relieves venereal pains.

PRENANTES SERPENTARIA, (*Lion's Foot, Snake-Root, Milk-Weed.*) The Root.

This biennial plant rises from four to six feet high, set with leaves or long foot stalks, with webbed edges. The root of first year's growth, is about the size of the little finger, tapering to a point; when broken, exudes a milky substance of a pure intense bitter taste.

Medical Properties.—Diaphoretick and anticeptick.—This is one of the best counter poisons, probably belonging to the vegetable kingdom, and is particularly serviceable in all malignant diseases, such as the yellow fever, hydrophobia, bites of venomous reptiles, stings of insects, &c. To be taken in half tea spoonful doses of the powdered root, or in decoction of the recent root bruised, or the milky juice.—In cases of external poison, the same application should be made to the parts. It may be administered in all cases where tonicks and stimulants are necessary. This plant may be used in families with safety, having due regard to the quantity, always beginning with the smallest prescribed doses, and to repeat it until the desired object is accomplished. There are several species of this plant, some of which grow eight or ten feet high, possessing similar properties, and are particularly serviceable in all cases of fever, dysentery, &c.

MAMTAIN FLAX. The Root.

This plant grows on dry barren soils, and the stalk bears a great analogy to flax, hence its name. The root is about the size of a pipe stem, of a light yellow colour, producing a lasting sensation in the mouth.

Medical Properties.—Powerfully tonick, diaphoretick and gently anticepuck. The powdered root in doses from half to a tea spoonful infused for a few minutes in a tea cup full of hot water, and taken at intervals of twenty or thirty minutes, to be increased and repeated according to the age and circumstances of the patient, removes all febrile symptoms in any stage of fever, and restores tone to the digestive organs. This article claims a high rank in the healing art, and may be used with safety, in all cases of disease, and generally with success. It is very serviceable in all cases of dysentary, dispepsia, and debility of the nervous system. This powerful medicine should be used only in small quantities, and repeated as circumstances require.

GENTIANA OCHROLEUCA, (*Gentian*.) The Root.

This plant sends forth several stalks, two feet high, bearing pale red or yellow berries on each leaf. The root is of a light yellow colour, and bitter taste.

Medical properties.—Tonick, gently cathartick, & stimulating. The bark of the root in half tea spoonful doses in molasses or warm water, or by infusing an ounce of the powder in a quart of spirits, and taken in table spoonful doses, three or four times a day, excites a secretion of the gastric juice, and promotes digestion. It is very serviceable in all cases of torpor of the nervous system, lethargies, palsies, &c. or in any other case where tonicks and stimulants are necessary.

HYDRASTRIS CANADENSIS, (*Yellow Root*, *Golden Seal*.)

THE stalk of this plant rises about twelve inches high, bearing a deeply indented leaf with a white blossom, suc-

ended by a red berry ; the root is of a bright yellow colour, about the size of a pipe stem, and from one to three inches long, with numerous small yellow fibers of a bitter taste.

Medical Properties.—Tonick, slightly astringent, and stimulating. The root in powders in half tea spoonful doses, excites action of the parietes of the stomach, and promotes digestion. In cases of flatulency in the stomach, or pressure, arising from indigestion, and taken in half tea spoonful doses of the powders in molasses, or warm water, gives immediate relief. It is also, an excellent remedy for the thrush or canker in the mouth, foul ulcers, &c. It is a valuable ingredient in stomachick bitters, particularly serviceable in very debilitated cases, combined with peach kernel.

LIRIODENDRON TULPIFERA, (*White Wood, Tulip Tree, Poplar.*)

THIS tree grows to a great size, and bears white bell shaped blossoms.

Medical Properties.—Tonick, carminative, stimulating and vermifuge. The bark of the root in powders, or the expanding buds in alkaholic extracts, is very serviceable in all debilitated cases of the nervous system, fatulency, cholick, pains, dispepsia, &c. The powders in tea spoonful portions, & often repeated, proves a valuable vermifuge, taken in cane molasses or sugar. It is an excellent ingredient in tonick bitters, being peculiarly calculated to give tone to digestive organs.

(MULLEN.) The root and leaves.

Medical Properties.—The root of the first year's growth of this biennial plant possesses tonick, diuretick and slightly astringent qualities. The bark of the root is peculiarly calculated to restore tone to the nervous system, and digestive organs in all low debilitated cases, where the more stimulating tonicks would be inadmissible. It is very serviceable in the ague, combined with sassafras in large quantities, taken in a strong decoction, as warm as can be bourn, a little before the chill commences. It is

very efficacious in epileptick fits, consumptions, dropsies, &c. It should be made a constant drink, and used freely. Boiled in milk relieves dysentary and piles, when drank freely, and applied by injection. The leaves wet with vinegar or water, and applied to swellings in their forming stages, generally gives relief, particularly in the breasts of females.

CORNUS FLORIDA, [*Box wood, Dog wood.*] The bark of the root.

THIS shrub grows from twenty to forty feet high, bearing white blossoms succeeded by bunches of red berries.

Medical Properties.——Tonick, astringent, and anticeptick. The powders in tea spoonful doses, are successfully employed in agues, dysenteries, &c. ; and in all cases where tonick and astringents are necessary, by lessening the quantity in debilitated cases. A strong decoction externally applied, cleanses foul ulcers, and often removes white swellings: applied to the bowels by injections, relieves all dysenteric symptoms. Charcoal made from the wood, pulverized, and taken in table spoonful doses, combined with an equal quantity of sweet oil, and one gill of sweet milk, is an excellent remedy for the dysentary. The bark should not be employed in febrile cases.

ALETRIS ALBA, (*Unicorn, Fawn tail, Blazing star.*)
The Root.

THE stalk of this evergreen plant, rises about one foot high, bearing a white tassel; the leaves are close to the ground, of a pale green colour, resembling young corn leaves; the root is about the size of a pipe stem, from one to two inches long, very hard with numerous wiry fibres.

Medical Properties.——Tonick, diaphoretick, diuretick, and stomachic. The powdered root taken in doses from half to a tea spoonful several times a day, restores tone to the digestive organs, removes flatulency colick, pains, rheumatism; and gives tone to the secretory vessels, and prevents obstructions of the glands, or what is called taking

cold. It is particularly serviceable in cases of the mumps, when from exposure, or any other cause, the disease is translated to the scrotum in men, or the mammæ in women: by taking freely of the powdered root, and applying the same, moistened with vinegar to the parts, and bathing occasionally with a strong decoction, gives immediate relief. It should be added to the tonick bitters, as one of the most important ingredients. The flowers dried and powdered makes a valuable snuff.

ARALIA NUDICAULIS, [*Sarsaparilla, Yellow Farilla,*]
The Root.

THIS vine grows from six to eight feet in length, and winds around any substance with which it comes in contact; the root is long, slender, and of a yellow colour.

Medical Properties.—Tonick, antiscorbutick and stimulating. It is an excellent ingredient in stomachick bitters, calculated to strengthen the nervous system, and promotes digestion. It is very serviceable in venereal diseases, and mercurial affections, combined with sassafras and horseradish, in a strong decoction, and drank freely. The root only is used.

SCUTELLARIA INTEGRIFOLIA, (*Scull Cap Blue,*
Widowhooded Herb.)

THE stalk of this plant rises to the height of three or four feet, with long branches, bearing blue blossoms, succeeded by caps.

Medical Properties.—Tonick, diaphoretick and antispasmodick. It is very serviceable in intermittents, and debilitated cases of the nervous system, taken in doses from half to a tea spoonful of the powdered leaves in warm water, and repeated according to the case, taken in tea spoonful doses, repeated several times a day, relieves hydrophobic affections. It is a valuable tonick, and may be used in all cases where tonicks are required; particularly in agues, combined with the unicorn and prenanthis.

FRAZORA WALTERI, (*Columbo.*) The Root.

THIS plant grows from four to six feet high, with numerous short branches, bearing whitish blossoms, succeeded by seeds. The root is large carrot shaped, of a yellow colour, and bitter taste.

Medical Properties.——Tonick, gently astringent, and stimulating. The root in tea spoonful doses, is an excellent tonick, calculated to give tone to the digestive organs, & strengthen the nervous system; also, for the cholera-morbus, taken in water or wine, to be repeated as necessity requires.

COPTIS TRIFOLIA, [*Golden Thread.*] The Root.

THIS small plant or vine, is generally found on moist soil. The root is a yellow thread like substance of a pure bitter taste.

Medical Properties.——Tonick, slightly astringent, and stimulating. The root in powders or decoction is an excellent remedy for the thrush or canker in the mouth. It is an excellent tonick, promotes digestion, and relieves flatulency.

MAGNOLIA ACUMINATA, [*Cucumber tree.*] The seeds and inner bark.

THIS tree grows to a considerable size, and bears a kind of large fruit, bearing some resemblance to a cucumber, hence its name.

Medical Properties.——Tonick, and gently cathartick. The seeds in alcoholic extracts, or infused in water, excites action of all the secretions, and removes chronic, rheumatism, and promotes digestion. It may be used in all cases where tonick and stimulants are wanted.

CERASUS VIRGINIANA, (*Wild cherry, Black cherry.*)
The bark and gum.

Medical properties.—Tonick, astringent, and anticeptick. The bark of the root claims the preference; and is an excellent remedy, for the ague, and all debilitated cases, of the nervous system, and suppression of the menses. A strong decoction of the bark forms a good wash for foul ulcers, cancers, &c.

SALIX ERIOCEPHALA; (*Puss willow, Rose willow.*)

THIS shrub or bush grows from three to five feet high, of a reddish colour, bearing buds, and has a pure bitter taste.

Medical Properties.—Tonick astringent, anticeptick.—A strong decoction of the bark in milk, relieves all dysenterick symptoms, in water, is an excellent remedy for ulcerous sore throats, agues, &c. A strong decoction applied externally is a valuable anticeptick in all gangrenes, mortified sores, foul ulcers and cancers; also an excellent ingredient in stomachick bitters.

(PEACH TREE,) *The bark, Kernels and Gum.*

Medical properties.—Tonick, gently stimulating and slightly astringent. The bark of the young sprouts, or the kernels from the stone, are remarkably calculated to restore tone to the digestive organs in all debilitated cases, where more stimulating tonicks would be improper. The gum that exudes from the tree, is an excellent mucilage, and may be used in all cases where this class of medicines are indicated and is an excellent substitute for gum arabic, as it possesses equal if not superior properties.

(BLACK ROOT.) *The Root.*

This plant grows about three feet high, set with four leaves at each joint. The root is about the size of a large pipe stem, of a dark shade, and very bitter taste.

Medical Properties.—Tonick, cathartick, and gently

sudorifick. The root in powders or decoction in small potions, often repeated, is a valuable cathartick and diaphoretick, and gives action to all the organs.

HASTATA, (*Culver's Physic.*) The root.

THIS plant rises from two to three feet high, with whorls of leaves, five or six inches apart, growing around the stalk, which terminates in tassels of white flowers; the root is about the size of a pipe stem, of a dark brown colour, and bitter taste.

Medical Properties.—Tonick, cathartick, sudorifick, and gently stimulating. An infusion of the whole plant, taken in small doses, and often repeated, proves a sudorifick and cathartick, and gives tone to the digestive organs. The bark of the root is preferable, and when used in doses from half to a tea spoonful in powders, gives a general action to all the organs of the system, & may be taken in any case of disease where tonicks, catharticks and sudorificks are wanted.

OF DIURETICKS.

DIURETICKS are medicines that act particularly on the urinary organs, and promote an increased secretion of urine. The importance of this class of medicines in the healing art, will be duly acknowledged, when it is considered that through these organs are removed, fluids that are entirely excrementitious, and no longer subservient to the perpetuity of the system.

(TURPENTINE ROOT.) The root.

THIS plant rises six or eight feet high, bearing numerous white blossoms; the root is a mat of white fibres, about the size of a common knitting needle, possessing an aromatic balsamic taste, bearing a little resemblance to turpentine, from which it derives its name.

Medical Properties.—Powerful diuretick, gently stimulating, and diaphoretick. The root in powders or decoc-

tion drank freely, removes suppression of the urine, and promotes a general perspiration. This article is perfectly safe, and may be used with safety in cases of obstructions of the urinary organs, arising either from the application of blisters, gravel, &c.

EUPATORIUM PURPUREUM, (*Queen of the meadow.*)

THE stalk of this plant rises from four to six feet high, with five leaves at each joint, and bears purple blossoms. The root is of a dark brown colour, and fibrous, possessing a pleasant taste.

Medical Properties.——Diuretick, gently stimulating, and diaphoretick. The root in decoction, or powders, in warm water and drank freely, removes a suppression of the urine, and is serviceable in rheumatisms, dropsies, gout, &c.

GNAPHALIUM AMERICANUM, (*Life everlasting, old field balsam.*)

THIS plant grows about two feet high, bearing small leaves, and white blossoms of a peculiar fragrant smell.

Medical Properties.——Diuretick and stimulating. A strong infusion drank freely, excites action of the urinary organs, and of the exhalents, and is serviceable in the gravel, fluor-albus, & in all debilitated cases of the nervous system, and consumptions. A bed made of the blossoms is very efficacious for debilitated patients to sleep upon. The herb yields by distillation, an extract remarkably efficacious in consumptions.

JUNIPERUS COMMUNIS, (*Juniper, the berries and essential oil.*)

THIS ever green shrub, grows on banks of creeks, from eight to twelve feet high, bearing a berry about the size of a large pea, of a pleasant spicy taste.

Medical Properties.——Diuretick, carminative, diaphoretick, and gently stimulating. A strong infusion of the

seeds taken freely, removes suppression of the urine, flatulency, and promotes perspiration. The essential oil in doses of six or eight drops on loaf sugar, or dissolved in alcohol, has a similar effect. The berries infused in alcohol, makes a very pleasant stimulant, and may be resorted to with safety. Rushes, high milk-weed, dwarf elder, are good diureticks, and may be used with perfect safety.

OF ASTRINGENTS.

ASTRINGENTS are medicines, that are supposed to act on the living fibres and bring the parts into more immediate contact. It is however, extremely doubtful whether any article can act on the living principle, and produce constriction or solidification, as in the process of tanning.— But it is equally certain, that medicines called astringents, restrain hemorrhages, (bleeding,) and excessive alvine discharges, &c. It would, I think, be more proper to ascribe the effect these medicines have in checking those discharges to their tonic and stimulating influence on the nervous system, which produces a general circulation. The well known effect that diffusible stimuli have on the system in checking hemorrhage, are in consequence of removing constriction, promoting a general circulation, and thereby lessening the pressure on the parts.

GERANIUM MACULATUM, (*Crane's bill, upland cranes root, flaxwort.*)

THE stalk of this plant rises ten or twelve inches high, bearing light purple blossoms, with a small spike protruding from its centre, which has some resemblance to a crane's bill hence its name. The root is about the size of a pipe-stem, two or three inches long, of a dark brown colour, and of a pure astringent taste.

Medical Properties.—Astringent, gently tonic, and styptic. The root of this plant in powders, or the recent root bruised and boiled in milk, stops hemorrhages, fluxes, and the cholera morbus, &c.; combined with one third of its quantity of blood root and taken in half tea spoonful doses and repeated as necessity requires, cures the thrush or

sanker, relieves coughs, venereal complaints, and is very serviceable in all debilitated cases of the nervous system. A strong decoction applied by injection, is very serviceable, in cases of the gleet gnorrhœa, dysentery and piles.

(WINTER BRAKE.) The root.

THIS ever green plant puts forth several stalks, to the height of ten or twelve inches, and is generally known.

Medical Properties.—Powerfully astringent, & styptick. The powders in tea spoonful doses, in a tea-cup of warm water, sweetened with sale molasses, is an excellent remedy for the dysentery. The powders moistened, or the green plant bruised and applied to a bleeding orifice, contracts the parts and stays the discharge.

QUERCUS ALBA, (*White oak.*) The inner bark.

Medical Properties.—Astringent, tonic, and anticeptick. The inner bark boiled in milk or water, in small doses, and often repeated, relieves all dysenteric symptoms, and is very serviceable in agues. A strong decoction makes an excellent wash for foul ulcers, sprains, relaxed and decayed limbs, and applied to the surface of the body strengthens the nervous system. The yellow oak possesses similar properties, and is preferable in the ague and dysentery.

ABIES CANADENSIS, (*Hemlock, Spruce.*) The bark, tops and oil.

THIS ever green tree grows to a considerable size, and is found on banks of creeks, and mountainous parts of the United States.

Medical Properties.—Astringent, diaphoretick, and stimulating. A strong decoction of the boughs taken freely, promotes a general action on the exhalents, and is a good remedy in fevers, rheumatisms, dysenteries, after pains, obstructions of the glands, coughs, &c. The essential oil has a similar effect, taken in doses from six to twelve drops

on loaf sugar, or dissolved in alkohol. The oil is a powerful stimulant, and is remarkably good in all weak debilitated cases of the nervous system, raises the pulse, and increases the circulation.

ALLSPICE.

THIS spice is a production of the tropical climates, and is used principally as a condiment.

Medical Properties.—Gently astringent, nervine, and diaphoretick qualities. The allspice in powdered doses, from half to a tea spoonful, has the most happy effects in all excessive alvine discharges, and debilitated cases of the nervous system, and to allay its increased excitement; the quantity to be lessened, increased, or repeated according to circumstances. In very weak and low nervous cases, one fourth of a tea spoonful is quite sufficient, and not very often repeated. If a stricture, accompanied with a sensation of heat follows the use of this or any other medicines, the diffusible stimuli should be resorted too such as horseradish root, sassafras, &c. This article claims the preference over common astringents on account of its nervine qualities, which are equal if not superior to the valerian, and is peculiarly calculated to give a natural tone to all the organs of the system.

(BLACK HAW.) The bark of the root.

THIS shrub grows from twenty to thirty feet high, bearing a white blossoms succeeded by black berries of a very pleasant taste.

Medical Properties.—Astringent and tonic. The bark of the root in doses from one fourth to half a tea spoonful in warm water sweetened with sale molasses, is very serviceable in all cases of a relaxation of the system, particularly of the alimentary canal. Two ounces of the powder infused in a quart of spirits, and taken in table spoonful doses, is an excellent remedy for intermittents, jaundice, and in all cases where astringents and tonicks are necessary. It should be used only in small quantities, and repeated as necessity demands.

POLYGONUM BISTORTA, [*Great Bistort, Snake weed.*] The root.

THIS plant grows two or three feet high, with long indented leaves, and bears light purple blossoms. The root is about the thickness of the little finger, of a dark brown colour on the outside, redish shade within, and is bent vermicularly, of a rough astringent taste.

Medical Properties.——Powerfully astringent, tonic, styptick and slightly anticeptick. The root in powders, in tea spoonful doses, and repeated as necessity requires, stays hemorrhages, and removes dysenteric symptoms; and applied to wounded blood vessels, acts as powerful styptick. It may be employed with safety in all hemorrhages either internal or external.

OF NERVINES.

NERVINES are medicines possessing a peculiar stimulus, which, when acted upon by the absorbents, are calculated to give tone, and allays an increased excitement of the nervous system.

VALERIANA SYLVESTRIS, (*Wild Valerian, Lady Slipper, Umbil.*) The root.

OF this genus of plants, there are several species possessing similar qualities. They are designated, principally by the colour of the blossoms which are yellow, white, and red or blue. The yellow grows from one to two feet high, with long ribbed leaves, bearing yellow blossoms of an oval form about the size of a patridge egg. The mat like fibrous roots, are of a yellow brown colour, of an aromattick bitter taste; this species grows in swamps. The white generally grows on dry land, bearing a white blossom, and is very similar to the yellow in other particulars, but is stronger. The blue or red shoots up a naked stem six or eight inches high, bearing a bluish red blossom, about the shape and size of the former. Two leaves rise from the root about six inches high receding from the stalk.

Medical Properties.—Nervine, tonic, and antispasmodic. The root in powders, in potions from half to a tea spoonful in warm water, is very serviceable in all cases of an increased excitement of the nervous system, spasm, cramps, hysterical affections, convulsions, epileptic fits, and in all debilitated cases of the system. The better mode of preparation, is to infuse three ounces of the powders in one quart of spirits, to be administered in table spoonful doses, and repeated or increased according to circumstances. Water does not fully extract its virtues.

LACTUCA ELONGATA, [*Wild Lettuce.*] The root.

This plant grows about six inches high, bearing a thick roundish leaf of a strong smell, containing a milky juice, which exudes when broken.

Medical Properties.—Nervine, diuretic, gently laxative, and diaphoretic. An extract made by infusing the bruised herb in twice its quantity of spirits, to be taken in half tea spoonful doses, increased or repeated as necessity requires, is very serviceable in all dropsical habits, obstructions in the alimentary canal irritation of the nervous system, dysenteries, colic pains, and coughs. This is an excellent anodyne, and promotes sleep, and may be used in watery extracts, or the expressed juice, with safety and general success.

GENTIANA SAPONARIA, [*Sopewort, Indian Snake Root.*] The root.

This is an ever green plant, growing ten or twelve inches high, with deep indented leaves, set on long foot stalks, bearing a resemblance to brake leaves. The roots are white and fibrous, of a pleasant aromatic bitter taste.—When agitated in soft water produces a suds like soap.

Medical Properties.—Nervine, tonic, and gently diaphoretic. The powdered root in tea spoonful doses, in warm water, repeated, increased, or diminished, as circumstances seem to indicate, allays irritation of the stomach, checks vomiting in the most desperate cases of the cholera.

morbus, or sick stomach, [a disease peculiar to the western part of this state.] It also, is very serviceable in all debilitated cases of the nervous system; obstructions on the exhalents, and for the bite of venomous reptiles, when taken freely, and a strong decoction applied to the parts effected. This is a valuable medicine, and may be used with safety in families.

ROSEMARINAS, (*Rosemary*.) The herb, flower, and essential oil.

THIS shrub is a production of the tropical climates and possesses a fragrant smell and a pungent bitter taste.

Medical Properties.——Nervine, gently tonic and stimulating. An infusion of the herb, or flowers, drank freely, or the oil, [which is preferable] in doses of six or eight drops on loaf sugar, allays an irritation of the nerves of the stomach, and is very efficacious in hysterical affections, debility of the nervous system, epileptic fits, spasms, &c., being particularly calculated to produce a general action.

HUMULUS LUPULUS, (*Hop*.) The flowers.

Medical Properties.——Nervine, tonic, anticeptick, gently astringent, and anodyne. The better mode of preparation is to press a bottle half full of the recent flower, then fill the bottle with good spirits. Taken in potions from half to a table spoonful and repeated, as necessity requires, allays irritation, of the nervous system, checks the frequency of the pulse, strengthens the muscular power, excites action of the paretics, of the stomach, promotes digestion, and procures sleep. A hop pillow placed under the patient's head, has produced sleep when other means have failed. The powders snuffed up the nose relieves the head ache. A strong decoction applied to gangrenous swellings, painful ulcers, cancers, &c., gives almost immediate relief. It has sometimes been successfully employed in cases of the gravel, or the suppression of the urine. It is particularly serviceable in beer as it prevents the acetous fermentation.

OF CARMINATIVES.

CARMINATIVES are medicines calculated, when acted upon by the stomach and bowels, to impart to those languid organs a proper degree of stimulus, which will enable them to perform their natural functions & remove wind and flatulency.

ACORUS CALAMUS, (*Sweet flag.*) The Root.

THIS plant grows to the height of three or four feet.—The root is of considerable size, of a light colour, and possesses an aromatick pleasant taste.

Medical Properties.——Carminative, antispasmodick, and gently stimulating. Taken in doses from half, to a table spoonfull of the powdered root, in warm water, gives immediate relief in cases of flatulency in the stomach and bowels, spasms, &c., and promotes action on the exhalents.

MENTHA PIPERITA, (*Peppermint.*) The herb and essential oil

THIS plant is cultivated in fields and gardens for distillation, and is generally known.

Medical Properties.——Carminative, antispasmodick, and stimulating. Taken in doses from two to six drops of the oil on loaf sugar, and repeated, removes flatulency from the stomach, and bowels. An infusion of the dry herb, in hot water, steeped in a close vessel has a similar effect.

MENTHA VIRIDIS, (*Spearmint.*) The herb and essential oil.

Medical Properties.——Carminative, nervine, and stomachick. This medicine is similar to peppermint, but more serviceable in debilitated cases. Fennel, caraway, annis, & angelica seed and root are good carminatives in powders or essential oil. Ginger, pepper, galengal, are all good carminatives, and may be taken with safety in small quantities, and repeated as the case demands.

OF ANTISPASMODICKS.

ANTISPASMODICKS are medicines, when acted upon, by the parietes of the stomach, remove constriction and give tone, and general circulation, to the nervous fluid and thereby relax spasms, and allay pain.

SYMPLOCARPUS FÆTIDA, (*Skunk Cabbage.*) The Root.

THIS article claims the first rank among the bulbous roots. The stalk is from three to four feet high, bearing large leaves of a strong nauseous smell. The root is bulbous, rough, of a dark brown, with numerous fibres, running deep into the ground.

Medical Properties.——Antispasmodick, expectorant, carminative and stimulating. The root in powders, in doses from half a tea spoon to half a table spoonful in warm water, is particularly serviceable in spasms, hysterical affections, asthma, griping pains in the bowels, &c. A tea made of the root, excites a general action, and helps digestion. This valuable medicine may be used in families with safety: The roots and seeds are the only parts used. It is also used successfully in all consumptive cases, catarrhs, &c.

AMBROSIA ELATIOR, (*Rag weed, Roman worm wood.*) The herb.

THIS plant grows from three to four feet high, and has numerous branches, with jagged dark green leaves, white blossoms, of an intense bitter taste.

Medical Properties.——Antispasmodick, tonic, and sudorific. The herb taken in decoction, removes constriction, allays pain, and irritation of the stomach, and excites a powerful action on the exhalents. Its anodyne qualities, render it remarkably calculated to relieve after pains, hysterical affections and obstructions of the system in general. It is very efficacious in all cases of the fever, peculiarly calculated to remove all febrile symptoms, especially in its forming stages.

CARTHAMUS TINCTORIOUS, (*Saffron.*) The flowers

Medical Properties.—Antispasmodick, anodyne, and stimulating. A strong infusion of the flowers drank freely, removes spasms, allays pains and excites a general action on the exhalents. It is very serviceable in all cases of nervous and hysterical affections, obstruction of the menses, &c. It remarkably excites action on the exhalents, in cases of what is erroneously called striking in of eruptions on the surface which is nothing more than a torpidity of the exhalents arising from a lack of stimuli. In this exhausted state of the exhalents, the acriminous fluids are not secreted from the blood, as they are deposited on the surface.

(*Garlick.*) The root or clove.

Medical Properties.—Antispasmodick, gently diuretick. The expressed juice relieves spasms, hysterical affections, paroxysms of the asthma, particularly in cases of long standing, also in the whooping cough.

(*Rue.*) The herb, or expressed juice.

THE expressed juice of the green herb in doses from one to three tea spoonful in molasses mucillage or milk, gives great relief in all spasmodick affections of the lungs, also in hysterical affections, &c. In addition to the foregoing list, may be enumerated, whole mustard seed, to be taken in table spoonful doses, as an excellent antispasmodick, and has the most happy effects in removing spasms, gouty affections, and costive habits. Either in doses from twenty drops, to a tea spoonful, in cold water, is an excellent antispasmodick. Valrian, in tea spoonfull doses of the powdered root, oil of rosemary, in doses, from six to ten drops on loaf sugar, are all good antispasmodicks, and may be used with safety, in all cases of cramps, spasms, &c.

OF EXPECTORANTS.

EXPECTORANTS are medicines that have been supposed to act on the secret of the chest and promote a discharge of mucus, called expectoration, or spitting. But the doctrine

which has been generally propagated, that a quantity of mucus is constantly accumulating in the lungs, bronchiea, or trachea, under disease, is without foundation. The matter discharged by coughing, is secreted by the mucus membrane that lines the back part of the mouth, called the pharynx, whose office appears to be, to remove from the blood, excrementitious fluids, that have been retained in consequence of a torpidity of the exhalents, the natural medium, through which they were designed to pass.

It appears contrary to the general law of nature to produce a secretion that would be calculated to destroy the system. That the system would sustain an injury by a deposition of a viscid mucus substance, within the trachea, requires no other evidence than the well known effect produced on the system, when the smallest quantity of any substance, however liquid, finds its way into the trachea or windpipe.—“Let this suffice.”

[COWFOOT.] The Root.

THIS plant grows about eight inches high, several stalks from the same root, bearing round light olive green leaves about the size of colts foot leaves. The root consists of numerous dark coloured fibers of a pleasant taste, acting powerfully on the fauces. The root in powdered potions of one fourth of a tea spoonful in water is one of the most powerful expectorants probably in the vegetable kingdom. It may be used in all cases where expectorants are proper, with safety, and generally with success.

ARUM TRIPHILLUM, [*Indian Turnip, Wake robin.*] The Root.

Medical Properties—Expectorant, stimulating, and gently diaphoretick. The recent root made into a conserve with loaf sugar in the proportion of one part of the turnip to three of sugar; taken in tea spoonful doses, excites action of the mucus membrane of the pharynx, and causes a discharge of mucus. It is very successfully employed in the whooping cough, catarrh, asthma, &c. The recent root bruised and boiled in milk, is very serviceable in con-

sumptions. The dried root grated has a similar effect, but less efficacious, to be used in tea spoonful doses, in honey, molasses, or water.

MARRUBIUM VULGARE, [*Hoarhound*.] The herb.

THIS plant grows from one to two feet high, with numerous branches, bearing pale green leaves, and white blossoms, possessing a very bitter taste.

Medical Properties.—Expectorant, tonic, anodyne, and diuretic. The expressed juice, taken in doses from a table spoonful to half a wine glass in the morning, removes hoarseness, excites expectoration, promotes digestion, strengthens the nervous system, and relieves coughs, catarrhs, &c. The dry herb infused in water, or steeped in milk, has a similar effect. To this class may be added several others, that are ranked under different heads, which also possess expectorant qualities; few of which will be enumerated as claiming the preference. Blood root in powders, combined with three times its quantity of crane's bill, and taken in half tea spoonful doses, and repeated, is an excellent expectorant. Elecampane in half tea spoonful doses of the powdered root, is a very useful expectorant, to be taken in honey. Angelica is a good expectorant in half tea spoonful doses, combined with honey; or the essential oil in doses of six or eight drops on loaf sugar. A strong infusion of angelica, applied by injection, removes colick, pains, cramps, spasms, paroxysms of the asthma, &c. Hyssop in infusion, or essential oils, is a valuable expectorant; from six to eight drops of the oil, is a sufficient dose.

OF MUCILAGES.

MUCILAGES are medicines calculated to obtund acrimony, soothe and sheathe irritable nerves, and impart a degree of nutrition to the system, when the stomach and bowels are not susceptible of acting upon by more irritable substances; they should therefore, accompany almost every administration, more particularly in fevers, dysenteries, &c.

ULMUS FULVA, [*Slippery elm, Red elm.*] The inner bark

Medical Properties.——Mucilaginous, slightly astringent, and anticeptick. The inner bark in powders, in tea spoonful potions, in cold water, makes an excellent mucilage in fevers, dysenteries, catarrhs, coughs, &c.; also, to be applied to the bowels by injection, and often rejected. It constitutes an excellent anticeptick when combined with ginger and charcoal, and moistened with vinegar, and applied externally to gangrenous swellings, mortified sores, cancers, &c. It should be used in almost every disease and stage.

CONSOLIDA, [*Comfrey.*] The root.

THIS plant grows two or three feet high, with long leaves, bearing pale blue blossoms. The roots are black on the outside, and white within, of a mild mucilaginous taste.

Medical Properties.——Mucilaginous and anticeptick.—The recent root bruised in cold water, forms an excellent mucilage in dysenteries, but preferable boiled in milk. It is particularly serviceable in cases of the fluor albus, gleet, gravel, &c. In the form of a poultice, it is an excellent application for painful swellings, and sores, particularly where the joint is affected and attended with a discharge of the synovia, [joint water.] It is an excellent ingredient in the shielding plasters, and cordials.

HIBISCUS PALUSTRIS, [*Marsh Mallows, Marsh Mallows.*]

Medical Properties.——Mucilaginous, diuretick, and expectorant. The root boiled in milk or water is a very valuable mucilage in dysenteries, fevers, obstruction of the urinary organs, asthma, &c. The low mallows possesses similar properties, and may be used as a substitute. It is a very efficacious remedy in consumptions, gouty affections, and scollula. Gum Arabick, is a good mucilage: peach tree gum, and black cherry tree gum, are also good mucilages, probably quite equal to gum arabick, they also possess gently diuretick qualities, and may be used freely in all diseas-

es when mucilages are required. Basswood, [*lin.*] the bark of the root of the sprouts is a good mucilage, and is particularly serviceable in poultice, applied to burns, scalds, or any inflamed and irritable sore.

OF ANTICEPTICKS.

ANTICEPTICKS are medicines calculated to retard decomposition, and prevent mortification; which is the consequence of a lack of a nutritious stimuli to supply the waste of the parts. This deficiency arises either from an increased exhaustion, owing to an augmentation of heat and irritation, as in cases of gangrenous inflammation; or to a compression on the conducting vessels, as in cases of tight bandages, &c.: or from a general want, or deficiency in the great store-house, the blood; as in cases of mortification on the extremities of old people.

MYRRHA, [*Myrrh.*] A gum resin.

Medical Properties.——Anticeptick, tonic and stimulating. The tincture of myrrh has long been used, and highly extolled for external applications in mortified sores, carious bones, attended with pain, and in all cases where anticepticks and stimulants are necessary. It may be taken into the stomach, in doses from half to a tea spoonful of the powders in molasses, in cases of debility, or when stimulants are wanted.

[*NETTLES,*] The herb.

THIS plant is produced in most parts of the United States, and is well known by the itching sensation that is produced, when it comes in contact with the skin.

Medical Properties.——Anticeptick and stimulating. The bruised herb, or a strong decoction, applied to gangrenous and mortified parts, relieves pain and stays decomposition. A strong decoction taken freely, excites a general action in the circulating fluids. The expressed juice taken in doses of two or three table spoonfuls once or twice a day, cures spitting of blood. A strong decoction drank freely, has a

similar effect. It also dissolves coagulated blood in the stomach. Alkalies and common salt, are good anticepticks, both externally and internally applied. Common salt in table spoonful doses, is an excellent medicine to stop bleeding at the lungs. It should be given in a dry state, and repeated once in thirty minutes until relief is obtained; water should not be drank immediately after the salt. It is also, an excellent medicine in table spoonful doses, to give tone to the stomach and bowels. To the list of anticepticks here enumerated, may be added several others, possessing anticeptick qualities, which have been classed under different heads, such as mandrake root, butterfly root, mustard seed, box wood bark, which are all good anticepticks, and may be used freely.

OF ANTHALMINTICKS, OR VERMIFUGES.

VERMIFUGES, are medicines that are calculated to destroy worms in the human stomach and bowels; although many more diseases are attributed to worms than facts would warrant; yet that they do some times exist in excess in the system, is certain; it will be proper to class those substances under this head, that are the most efficacious and safe in removing them from the system.

ANTHELMINTICUM, (*Oak of Jerusalem.*)

THIS plant is cultivated in gardens, and is generally known.

Medical Properties.——Anthalmintick, emmenagogue, and stimulating. This plant in powders or decoction, and expressed juice, cures worms; to be taken in teaspoonful doses in molasses, and often repeated. It is also given with success in all obstructions of the bowels.

PRINOS VERTICILATUS, [*Black Alder.*] *Winter bark.*

THIS shrub grows six or eight feet high, bearing red berries, which continue until frost comes; the bark is interspersed with small white spots, and when chewed, the spitte assumes a yellow appearance.

Medical Properties.—Anthelmintick, tonic and anticeptick. The powdered bark in doses from half to a teaspoonful in molasses, is a valuable vermifuge. A decoction of expressed juice, has a similar effect. It also allays pain and irritation of the stomach, and promotes digestion. A strong decoction of the bark externally applied, is an excellent anticeptick, and resists putrefaction and relieves pain.

POPULUS TREMULA, [*Aspen, shaking asp, white poplar.*]

THIS tree grows generally from twenty to forty feet high, but some times to a large size. The tops of the smaller growth are white and smoothe, of a very bitter taste.

Medical Properties.—Vermifuge, tonic, and slightly stimulating. The inner bark in fine powders, taken in teaspoonful doses, combined with molasses, and often repeated, proves an efficacious vermifuge. It is also, a good tonic, but rather harsh on weak stomachs, and is far inferior to the white wood. The green bark of the aspen simmered in lard to a crisp, strained, and the oil applied to swellings in their forming stage, removes them, particularly in the breasts of females. This application should not be neglected on the first appearance of any obstructions in the glands of the breast. The green part of the bark is to be preferred in making this ointment, and should be made as strong as possible; burning destroys its efficacy.

CASSIA MARILANDICA, [*American senna.*] The herb.

THIS plant rises three or four feet high, with numerous branches, bearing yellow blossoms, succeeded by long flat pods containing seeds.

Medical Properties.—Vermifuge, cathartick, and gently stimulating. The herb in powders or decoction, is a valuable vermifuge and cathartick, when taken freely. A strong decoction forms an excellent lavement to move the bowels. In addition to this enumerated list, may be added a few others that have been classed under different heads, to which they more particularly belong. The following are

the most safe and efficacious. Mandrake root in powders from half to a tea spoonful in molasses, and repeated as necessity requires. The powders of milk-weed, in similar doses, is often a successful vermifuge; common salt in tea or table spoonful doses, and repeated as circumstances require; sugar, lime water, are all good, and often prove efficacious, and may be resorted to with safety.

OF EMMENAGOGUES.

EMMENAGOGUES are medicines, that, when acted upon by the absorbents of the female system, are calculated to impart to the uterus a certain stimulating principle which promotes a secretion of the menses, and causes its discharge. That medicines when received into the circulation, act more powerfully on particular organs, require no further proof than a reference to the well known fact of the diuretick effects of juniper, the nervine of rosemary, &c. But it may be proper to remark that the most valuable emmenagogues are strong stimulants, and act powerfully on the nervous system, and are often attended with some exhaustion. It is, however, equally certain, that in all cases of a suppression of the menstrual discharge; this class of medicines, judiciously administered, have the most happy effects on the female constitution, by regulating one of its most important evacuations.

(*Cuckold, Spanish needles.*) The herb and seeds.

THIS plant grows from three to five feet high, with numerous branches bearing yellowish brown flowers; the seeds are black, forked, and are apt to attach themselves to clothes that come in contact.

Medical Properties.—Emmenagogue, diaphoretick and antiscorbutick. A strong decoction of the herb drank freely, removes all obstructions of the system, particularly of the menses, and suppression of the urine. It is, also, very serviceable in all cutaneous diseases, when taken freely for a considerable length of time. The bruised seed steeped, & a strong infusion drank freely on going to bed, cures the influenza, removes hoarseness, and all obstructions of

the glands of the throat. The young plant dried in the shade or kiln, furnishes an excellent beverage, and should be substituted for foreign teas, and custom will render it equally pleasant.

CIMICIFUGA SERPENTARIA, (*Black cohosh, Rattle weed, sqaw weed.*)

THIS plant rises five or six feet high, dividing into branches terminating in long tassels of white flowers, succeeded by brown shells containing seeds. The root is black and fibrous, of a mild and pleasant taste.

Medical Properties.——Emmenagogue, diaphoretick, stimulating and anodyne. The root in powders, in doses from one fourth to half a tea spoonful, combined with an equal quantity of mandrake root, and repeated once an hour in warm water, removes all female obstructions, rheumatic pains, gouty affections, colick, flatulency, &c., and gives tone to all the secretory and excretory vessels. This valuable medicine claims a high rank in the healing art, but should be used only in small quantities, as well as other powerful medicines. It should be used only to remove obstructions of the system.

JUNIPERUS SABINA, [*Savin.*] The boughs and essential oil.

This ever green shrub is a species of the juniper, and grows in the northern states, on barren soils, and on banks of creeks.

Medical Properties.——Emmenagogue, diaphoretick, vermifuge and stimulant. An infusion of the leaves taken freely, proves a valuable emmenagogue, and is also efficacious in removing catarrhs, hysterical affections and cutaneous obstructions. The essential oil has the same effect and is to be preferred. To be taken in doses of five or six drops on loaf sugar, and repeated as necessity requires. The savin in powders, or essential oil, has sometimes been successfully employed as a vermifuge. A strong infusion of the leaves, or essential oil, externally applied, is a valu-

able anticeptick in cases of gangrenous swellings, foul ulcers, carious bones, &c.; and sometimes cures warts.

PYRETHRUM PARTHENIUM, (*Feather few, fever few.*) The herb.

THIS garden herb, grows about two feet high, bearing yellow blossoms, of a bitter aromatic taste.

Medical Properties.—Emmenagogue, tonick, anodyne, and diaphoretick. A strong infusion of the herb, drank freely, proves a valuable emmenagogue and removes hysterical affections, excites a general action on the exhalents, and promotes digestion.

(*Cohosh, white, red and blue.*) The roots,

THESE are a species of the *cimicifuga*, but less efficacious; they grow about two feet high, with several branches, bearing different berries, such as white, red, and blue, from which they derive their names.

Medical Properties.—Emmenagogue, stimulant, and slightly astringent. The powdered root in tea spoonful doses, and repeated as necessity requires, promotes the menstrual discharge, relieves fluor albus, and hysterical affections. A tea spoonful of the powders, added to a strong infusion of spikenard roots, and taken for five or six weeks before confinement, on retiring to bed at night, is very efficacious for pregnant women, being calculated to strengthen the nervous system, and cause an easy delivery. Combined with an equal quantity of golden seal is a very good remedy for the thrush, or canker in the mouth.

ACHILLEA MILLEFOLIUM, (*Yarrow, Millefoil.*) The herb.

THE stalk of this plant grows about two feet high bearing yellow blossoms.

Medical Properties.—Emmenagogue, tonick, diaphoretick, gently astringent, and stimulating. A strong infusion of the herb is good in all female obstructions, hysterical affections and consumptions. The expressed juice is tonick, and promotes digestion.

(*Female flower, Regulator.*) The herb.

THIS plant grows about eight inches high, several stalks together, with round deep green leaves, bearing a resemblance to cow-slips. The root is about the size of a pipe stem, of a yellow brown colour on the out side, and of a redish shade within. It grows in swails in timbered land.

Medical Properties.—Emmenagogue and gently stimulating. A strong infusion drank freely, removes female obstructions and hysterical affections. Being peculiarly calculated to regulate the menstrual discharge, as it is equally efficacious when the discharge is too profuse. This medicine should be in the possession of every family.

OF PARTURITIENS.

PARTURITIENS are medicines calculated to act on the female system, and promote delivery.

TRILLIUM ERECTUM, (*Birth root.*) The root.

THERE are three species of this plant possessing similar properties. The red, white, and red and white, which are distinguished principally by the colour of the blossoms.—These plants rise about ten or twelve inches high, dividing into three branches at the top, bearing large leaves; at the centre of these branches, rises a small stem, bearing a bell shaped flower. Their roots are about the size of the thumb, with numerous small fibres, a light colour and pleasant taste.

Medical Properties.—Parturient, stimulating, and gently astringent. The powdered root in tea spoonful doses, in a strong infusion of spikenard roots, often repeated, wonderfully strengthens the nervous system, and aid delivery. It should be taken for several weeks before confinement, once a day on retiring, in tea spoonful potions. It is good in hysterical affections, fluor albus, bleeding at the nose, &c. It is also successfully employed in asthmas, colicks, and gravel.

(Red Raspberry.) The leaves.

THIS species of briar grows from four to five feet high, bearing white blossoms succeeded by red berries; the leaves are dark green on the upper side, and almost white on the under.

Medical Properties.——Parturient and astringent. A strong infusion of the leaves drank freely, removes untimely pains of pregnant women; and during labour, it stimulates the nervous system, and aids parturition. It is good in dysenteries, and in any case where mild astringents are necessary.*

TANACETUM VULGARE, (*Tansy.*) The herb.

Medical Properties.——Emmenagogue, tonick and stimulating. A strong infusion of the herb drank freely, is good to regulate travail pains, remove female obstructions, hysterical affections, &c. The expressed juice, taken in wine glass full doses, a little before the chilly paroxysm of the ague, greatly relieves the patient, and sometimes removes the disease.

(WINTER CLOVER.) The vine and leaves.

THIS ever green, grows in the form of a vine on banks of creeks, and bears red berries about the size of peas. The leaves resemble white clover leaves.

Medical Properties.——Gently stimulating, and anodyne. A strong infusion of this herb, taken freely, is very serviceable to regulate travail pains, and aid parturition.

OF ANTISCORBUTICKS.

THIS class of medicines, is calculated to obtund and neutralize the acrimonious fluids of the system, and operate some friendly change on the cutaneous vessels, by stimulating them to a natural action, and promote healthy secretions.

*Thomson.

RUMEX AQUATICUS. (*Water dock, Broad leaved Dock.*)

THIS plant grows four or five feet high, with long broad leaves. The roots are large, of a light colour, and a slight astringent taste.

Medical Properties.——Antiscorbutick, slightly astringent, and stimulating. The root in powders or decoction taken for some time, is an excellent remedy for the scurvy, & other cutaneous diseases. A strong decoction, or the recent root bruised and mixed with lard, is very serviceable in the salt rheum, venereal, &c. An infusion of the bruised roots in spirits or cider has a similar effect.

CHIMAPHILA CORYMBOSA, (*Pipsissiwa, Princes' Pine, Pyrola.*)

THIS is an ever green plant, and grows eight or ten inches high, with thick dark green leaves, and bears small shells containing seeds.

Medical Properties.——Antiscorbutick, diuretick, and gently stimulating. The leaves in powders, in teaspoonfull doses and often repeated, excites action on the exhalents, and removes acrimonious fluids and is very serviceable in scrofulous and cancerous affections, rheumatisms, & for weaknesses in the urinary organs.

ARALIA RACEMOSA, (*Spikenard, Hungary Root.*) The Root.

THIS plant grows three or four feet high with several large branches, bearing white blossoms, succeeded by small bunches of purple berries. The roots are of a considerable size, of a whitish colour, and fragrant smell.

Medical Properties.——Stimulating, aromatick, and antiscorbutick. The root steeped in a close vessel, and drank freely, or the essential oil which is preferable, is very serviceable in all cutaneous eruptions, foul ulcers and cancers: and particularly for pregnant women, combined with angel-

ica, and taken, when retiring, for four or five weeks before their confinement: dose from six to eight drops on loaf sugar, for internal applications.

COCHLEARIA OFFICINALIS, [*Scurvy Grass.*] The Herb and oil.

THIS annual plant is cultivated in gardens and is generally known.

Medical Properties.—Antiscorbutick, diuretick, and stimulant. An infusion of the herb drank freely, is an efficacious remedy for the scurvy, and other cutaneous diseases; also for scorbutick affections of the gums and mouth.—The essential oil has a similar effect.

[**WATER CRESSES.**] The leaves.

THIS plant grows in brooks, on rocks under water during the winter, and has long rough leaves. The roots are white and fibrous.

Medical Properties.—Antiscorbutick, stimulating, and stomachick. An infusion of this plant, taken for some time, is an excellent remedy for the scurvy, and other cutaneous diseases, and is very serviceable in consumptions, nervous debility, and dispeptic cases.

RUMEX ACUTUS, [*Yellow dock, Narrow leaf dock.*]

Medical Properties.—Antiscorbutick, and gently cathartick. A decoction of the root taken freely for a considerable length of time is very efficacious in all cutaneous diseases, cancerous affections, &c. The bruised root applied to cancerous humours and foul ulcers, gives great relief. The root bruised and combined with equal quantities of burdock root, scke leaves and cream, exposed, to a moderate heat for several days, cures the itch.

OF LITHONTRIPTICKS.

LITHONTRIPTICKS are medicines which are supposed to dissolve the calculi, or stone in the human bladder.

The calculi owes its origin to a torpid and deranged state of the urinary organs, which disqualifies them from decomposing and neutralizing those elementary substances composing the calculi, (the basis of which is phosphorick acid,) which have a strong affinity for each other. These calculous substances are, however, susceptible of being dissolved and their affinity destroyed, which has been proved by chemical experiments. But whether those substances, called lithontripticks, have any other effect in dissolving the calculi, than by exciting action of the urinary organs and liquifying its secretions, some doubts exist.

(LOW BUTTON BALL.) The bark of the Root.

THIS shrub grows about six feet high, bearing balls similar to the sycamore tree. The bark is rough, and of a dark colour.

Medical Properties.—Lithontriptick, stimulating and tonic. The bark of the root in powders, or decoction taken freely, gives great relief in cases of the gravel, & in debilitated cases of the urinary organs. It is preferable, combined with mucilages which may be said of all other medicines of this class.

[GRAVEL WEED.] The herb.

THIS plant grows in a mat like form, one leaf above another, which are about the size of a half dollar, thick, and contain a milky juice.

Medical Properties.—Lithontriptick, and gently stimulating. A strong tea made of the herb, and drank freely for some time, relieves the gravel, and suppression of the urine. This is a valuable and safe lithontriptick, and may be used alone, or combined with other articles of this class.

GAULTHERIA PROCUMBENS, (*Winter Green, Partridge berry.*)

THIS plant grows six or eight inches high, with dark green leaves, bearing red berries about the size of small peas, of a pleasant, aromatick taste.

Medical Properties.——Lithontripectick, diuretick, & stimulating. The leaves in powders, in infusion, or essential oil, are all good preparations for the gravel, suppression of the urine, dropsical complaints, and for debility of the nervous system. The oil however is preferable, and may be used in doses from four to six drops on loaf sugar, and repeated as necessity requires. It is a valuable ingredient in salves & stomachick bitters.

(JACOB'S LADDER.) The Root.

THIS plant grows in the form of a vine, eight or ten feet long, attaching itself to whatever substances, it comes in contact with, and bears heart shaped leaves and bluish berries. The roots are white, extremely hard, about as large as the finger, and of a mild and pleasant taste.

Medical Properties.——Lithontripectick, gently diuretick, and stimulating. The root in powders, or decoction taken freely, relieves the gravel and other urinary complaints.—It should be combined with mucilages and other medicines of this class.

ARBUTUS UVA URSI, (*Whortleberry.*) The leaves and bark.

THIS bush grows from two to four feet high, bearing white blossoms, succeeded by small purple berries.

Medical Properties.——Diuretick, tonick, and slightly astringent. The leaves and bark, in powders, are very serviceable in the gravel, and weakness in the urinary system, and in the hæmereal, dysentery, gleet and gonorrhœa.

DAUCUS CAROTA, (*Carrot.*) The seed and root.

THIS biennial plant grows wild in rich soils to the height of three or four feet, with numerous branches, bearing yellow blossoms, succeeded by small seeds of an aromattick smell and mild pungent taste.

Medical Properties.—The seeds are lithontriptick, diuretick, carminative and stimulating. The roots, mucilaginous and anticeptick.

The seeds bruised and steeped in a close vessel, and taken freely, gives great relief in all cases of debility, and obstructions of the urinary organs, flatulency, colicks, &c.—The roots of the first years' growth beaten to a pulp, is a valuable anticeptick, applied to foul ulcers, mortified sores, gangrenous inflammations, and cancers. It checks putrescency, softens indurated calous edges, and allays pain. In addition to this enumerated list, may be noticed, a few others, possessing lithontriptick properties, such as the following: Magnesia, lime water, alkali, and soda. They are however, calculated to weaken the digestive organs, when used for a considerable length of time. Their valuable effects on the system are probably owing to their antacid (*neutralizing acidity,*) qualities. Onion, garlic, and radishes are all good lithontripticks and may be used freely.

OF ERRHINES, OR STERNUTATORIES.

ERRHINES are medicines calculated to produce convulsions of the muscles of the chest, called sneezing; which is caused by an irritation of the olfactory nerve, or membrane that lines the nose, by the stimulating qualities of the substance.

MYRICA CERIERA, (*Bay berry, Myrtle wax, Candle berry.*) The bark of the root.

THIS shrub or bush is produced principally in the eastern states. It is, however, in small quantities on the borders of Lake Erie, on the beach, and in swamps. It grows from four to six feet high, bearing dark green leaves, and small green balls; from which a tallow is extracted.

Medical Properties.——Errhine, moderately astringent, and stimulating. The bark of the root in powders, used in the form of snuff, is a powerful errhine. In table spoonful doses, combined with an equal quantity of the powders of slippery elm in warm water, is an excellent remedy for the flux, or any excessive alvine discharge. The powders in tea spoonful doses, taken several times a day are a valuable remedy for the ague. The quantity should be varied according to the strength of the patient, and continued for a considerable length of time, after the paroxysms subside. The powders applied to the gums are good to remove the scurvy. It should not be employed in febrile cases, or where there is a structure on the lungs. It may be combined with the tonick bitters, as a restorative.

(*Wandering milk weed, silk weed.*) The root.

THIS plant rises about three feet high, with a reddish stalk, branching near the top and bearing white blossoms, succeeded by long slender pods hanging down under the stalk. The roots are about the size of the finger, running some distance under the surface of the ground, often sending up other stalks in their passage. The stalk or root, when broken, exudes a milky substance of a very bitter taste.

Medical Properties.——Errhine, tonick, carthartick and emetick. The bark of the root dried, and reduced to a fine powder, is a good errhine, and taken in tea spoonful doses, in warm water and often repeated, acts as a cathartick, and sometimes as an emetick. Small doses combined with mucilages, relieves a costive habit, and promotes digestion.—It has been sometimes employed successfully as a vermifuge in tea spoonful doses, and often repeated.

OF OPHTHALMICKS.

OPHTHALMICKS are medicines that are calculated to remove inflammation of the eyes. In regard to these applications a few general rules ought to be particularly observed, such as the following: washes containing powders, and all hot substances should be carefully avoided as being pernicious to the eyes.

(*Cat Tail Flag.*) The root.

Medical Properties.—Gently mucilaginous and diffusible. The recent root bruised and moistened with spring water, is an excellent application for an inflammation of the eye, and should be repeated as often as they become warm, and continued until relief is obtained. It is also a very serviceable application for any inflamed swelling.

(*Green Ozier, Pigeon Berry.*) The bark.

THIS shrub grows six or eight feet high, bearing white blossoms succeeded by small blue berries. The bark is of a dark green colour interspersed with white specks.

Medical Properties.—Ophthalmick, gently emetick and diffusible. The green bark bruised and moistened with spring water is good applied to inflamed parts, particularly to the eyes. The dried bark smoked is said to relieve the asthma. The twigs of sassafras split or bruised, and put into twice its quantity of water, makes an excellent ophthalmick, and should be applied freely in all inflammations of the eye. Spring water, or milk and water is a valuable application to inflamed eyes, and if thoroughly applied in due season, will remove the most inveterate cases. Spring water should be applied to the eyes every morning by putting the face into a vessel of water, and open and shut the eyes. This application, if duly attended to, will effectually prevent inflammation of the eyes, and measureably prevents dimness of sight. This is the most valuable application probably in nature, for the eyes. A mild salution of capsicum is an excellent remedy for all chronic cases of sore eyes. The expressed juice of the recent root of goldenseal, or a strong decoction of the powders, are good remedies for sore eyes. A solution of lobelia, or the expressed juice has some times been successfully employed. A weak solution of alkaline salts, (*pearlash,*) is one of the most valuable applications for inflamed eyes, with which we are acquainted, it should be applied cold, and not so strong as to irritate.

Having given a description of those vegetable medicines with a designation of their different properties that belong to certain classes, it remains to notice some valuable articles that possess only general exciting qualities. Amongst this class the following may be enumerated as the most important.

ÆSCULUS HIPPOCASTANUM, [*Buckeye, Horse-chestnut.*] The bark of the root.

THIS tree is found on rich bottom lands, and is a production principally of the western and southern states. It some times grows to a considerable size, with a thick light coloured bark, bearing balls from which starch may be made.

Medical Properties.—Anticeptick, stimulating, and gently astringent. The bark of the root bruised, and infused in warm water, is an excellent application for gangrenous inflammations, painful swellings, cancers, &c., and in all cases of inflammations, where mortification is apprehended. It is also an excellent lavement in all cases of mortification of the bowels. The root bruised to a pulp, is very serviceable when applied to foul ulcers and sores of long standing.

(*Consumption Brake, Rock Polly Pod.*) The root.

THIS species of brake grows in bunches, about one foot high, with finely cut leaves. The roots are dark brown, about the size of a small goose quill, growing in bunches, resembling a nest of black worms.

Medical Properties.—Anticeptick, mucilaginous, and gently stimulating. A strong decoction of the root is very serviceable, applied to painful swellings, and gangrenous and irritable sores. It is also, very efficacious in all consumptive complaints, and for a dry cough, in sirups sweetened with honey. The root bruised, makes a good external application for cancerous ulcers, old sores, &c.

ZANTHOXYLUM RAMIFLORUM, (*Prickly Ash.*)

The bark, husk and berries.

THIS shrub grows six or eight feet high, with numerous thorns, and bears dark brown berries. The roots are of a light yellow colour, and possess a pungent aromatick taste. The shuck or husk, [called Indian cloves,] that contains the seed, is the most valuable. The cloves tinctured in spirits, is an excellent remedy for the rheumatism, lethargy, obstructions of the urine, epileptick fits, agues, suppression of menses, &c.; it is also a good ingredient in the stomachick bitters. A strong infusion of the bark has a similar effect. The tincture is prepared by adding three ounces of the pulverized cloves, to one quart of fourth proof spirits. To be taken in doses from half to a table spoonful, and repeated according to the necessity of the case. This article should not be used for more than two weeks in succession, as it is liquifying to the blood.

POTENTILLA SIMPLEX, (*Cinque Foil, Five Finger.*)

The vine.

THIS vine bears a considerable resemblance to the straw berry vine, only it has five leaves where the straw berry vine has but three. This is a valuable medicine, & may be freely used as a diet drink in almost any disease; as possessing general exciting qualities. It is particularly serviceable in urinary complaints, scrofulous habits, and in all debilitated cases; being gently tonick and astringent.

ALBIES CANADENSIS, [*Hemlock Tree, Hemlock Spruce.*]

THIS ever green tree often grows to a large size, and is generally known. The boughs and essential oil are the most valuable parts. The boughs in a strong infusion, drank freely, promote a general action, remove soreness of the muscles, rheumatick pains, coughs, obstructions of the glands of the throat, influenza, &c. The essential oil is a powerful stimulant, diffusing itself through the system, lessening the arterial excitement, and removing constriction on the exhalents in febrile diseases. It is also partic-

ularly serviceable in all debilitated cases of the nervous system, raises the pulse and gives tone to all the functions of the body. It relieves after pains, in doses from six to twelve drops on loaf sugar.

NEPETA CATARIA, [*Catmint, Catnip.*] The herb.

AN infusion of the herb drank freely, proves a powerful stimulant, excites action of all the secretory and excretory vessels, and gives tone to the nervous system, and digestive organs.

LAURUS CINNAMOMUM, [*Cinnamon.*] The bark and essential oil.

THE bark in a strong infusion, or the essential oil is one of the most powerful stimulants belonging to the vegetable kingdom. The oil in doses from one to three drops on loaf sugar removes flatulency from the stomach and bowels, and is very serviceable in all debilitated cases, epileptick fits, palsies, &c., or in any other case where tonick and stimulants are wanted; but should not be employed in febrile cases. A drop applied to the nerve of a carious tooth, on cotton wool, or some other substance, removes the pain.

PERSICARIA URENS (*Arse Smart, Smart Weed.*)
The herb.

A strong decoction of this herb applied to gangrenous inflammations, sprains, bruises, &c., gives great relief. Taken internally, gives tone to all the organs, and stimulates them to a healthy action, removes soreness of the muscles, and all obstructions in the glandular secretions and excretions. Boiled in milk, and taken according to the strength of the patient, is very efficacious in the consumption. It may be employed with perfect safety in any stage of disease, with considerable prospects of success. The herb bruised and moistened with a strong decoction of the same, and applied to mortified sores, painful swellings, &c., gives great relief.

[*Chicktoe.*] The root.

THIS plant rises six or eight inches high, bearing a whitish blossom. The roots are white, bearing a strong analogy to chickens' toes, hence its name. The root in powders in half tea spoonful doses, excites action of the parietes of the stomach and promotes digestion.

ANTHEMIS NOBILIS, (*Chamomile.*) The Flowers.

AN infusion of the flowers drank freely removes flatulency and colick pains, and excites a general action, and removes female obstructions. It is an excellent ingredient in salves and ointments for external application, for which it is principally used.

MAY-WEED, (*Stinking Chamomile,*)

POSSESSES similar properties, and may be substituted for the former: the bruised herb or strong decoction, applied to swellings, sprains, contusions, &c. gives relief.

AMARA DULCIS, (*Bitter-sweet, Woodbine.*) The Bark.

THIS woody plant grows twelve or fifteen feet high, climbing upon whatever substance it comes in contact with, bearing bunches of red berries. The root runs a considerable distance under ground; is of a reddish yellow colour.

Medical Properties.—Powerfully stimulating, gently diuretick. The bark of the body and root in teaspoonful doses, in powders, and repeated two or three times a day for a considerable length of time, removes all obstruction of the system, particularly of the liver and spleen. It dissolves coagulated fluids, and promotes their discharge. It is an excellent ingredient in stomachick bitters, salves, ointments, &c.

ABIES BALSAMIFERA, (*Balsam of Fir.*) The Gum and Essential Oil.

THIS evergreen tree is a production principally of the northern and eastern states. The balsam is a very valuable

application for recent wounds, old sores, foul ulcers, &c.; and is very efficacious as a shielding plaster applied to a weak back. The oil distilled from the boughs or balsam is an excellent medicine in rheumatick pains and debilitated cases of the nervous system, when externally and internally applied. This is the most valuable article derived from this class of medicines.

PINUS SYLVESTRIS, (*Pin.*) The turpentine and oil (spirits of.)

THE turpentine that exudes from the pine tree is an excellent ingredient in salves, shielding plasters, &c. Taken in pills the size of common peas, three or four at a time, several times a day, according to the circumstances of the patient, is an efficacious remedy for the fluor albus, piles, gleet and debility of the urinary organs. A table-spoonful mixed with an equal quantity of molasses and the powders of slippery elm, diluted with a sufficient quantity of water, constitutes an excellent lacement in all of the above cases. The essential oil (called spirits of turpentine,) is a powerful stimulant, in small potions acts as a diuretick and sudorifick. It has been often successfully employed as a vermifuge in small potions on loaf sugar.

HELONIAS DIOICA, [*Colick Root, Devil's Bit.*]
The Root.

THE stalk rises two or three feet high, with long pointed leaves growing all around the stalk. The root is of a dark colour, bulbous, and of an aromatic, pungent taste. The root in powders, in tea-spoonful doses in warm water, relieves colick pains, allays vomiting, promotes digestion, and removes a fetid breath. The quantity should be increased or diminished according to the necessity of the case.

OROBANCHE VIRGINIANA [*Beech drops, broom rape.*]

THIS plant grows in bunches under beech timber, is of a light colour, without leaves, of a nauseous, bitter taste. The recent plant bruised and applied to foul ulcers, cancers, &c. gives great relief. The expressed juice often proves

very serviceable, applied to sore eyes. A strong infusion removes dysenteric symptoms.

PLANTAGO, [*Plantain.*] The Leaves and Root.

THERE are several species of this plant, which possess similar properties. A strong decoction of the root drank freely is very efficacious in all cases of obstructions in the glandular secretions and excretions, particularly of the exhalents; and is an excellent remedy in all febrile cases. The leaves bruised and applied to the part affected, cure the bites of spiders, venomous reptiles, &c. A strong decoction has a similar effect: the expressed juice should be drank freely during the process. It is also a good application for recent wounds or old sores.

(*Cancer Root.*) The root.

THIS substance grows out from the roots of oak trees, in the form of a knob of an irregular shape, of a brown colour, and rough, coarse texture. The stalk rises two or three inches high about the size of the finger, bearing loose scales. This is a valuable article in cancerous affections, sore mouth, &c., in decoction or powders. A strong decoction drank freely, is a good remedy in all febrile cases.

[*Sumac.*] The berries and bark of the root.

THIS shrub grows about ten or fifteen feet high, bearing bunches of red berries of a pleasant, acid, astringent taste. The berries in a strong decoction drank freely, are very serviceable in cases of a relaxed state of the nervous system & removes night sweats. The berries tinctured in brandy as strong as it can be made, gives great relief in the diabetes, dysentery, and all debilitated cases of the nervous system, fluor albus, gleet, &c. The bark of the root bruised and steeped in milk, is an excellent application for irritable sores, burns, scalds, and gangrenous swellings.

[*Gill-Grow-over-the-ground.*] The Herb.

THIS low plant or vine has a small round leaf, and bears a blue blossom, and has a resemblance of low mallows. A

strong decoction of the herb drank freely, is very serviceable in the whooping cough, consumption, influenza, and for a tickling cough.

SAMBUCUS CANADENSIS, [*white Elder, sweet Elder.*]

THIS shrub or bush grows five or six feet high, bearing bunches of white blossoms succeeded by purple berries. A strong decoction of the flowers, or bark of the roots or body, taken in sufficient quantities, proves a gentle laxative. The green bark of the body is an excellent ingredient in salves. The expressed juice of the berries evaporated to the consistency of salve, is very efficacious, applied to old sores on the skins or other parts of the body, giving them a healthy appearance, and causing them to heal. The same taken in table-spoonful doses for a considerable time, relieves a costive habit, and removes dropsical complaints.

COFFEA, (*Coffee.*)

TAKE the best coffee recently scorched, and prepared immediately after pulverizing in ounce doses, and drank as strong as it can be made without sugar or milk, relieves paroxysms of the asthma. It is also good in agues, diarrhoea, and in periodical head-ache when it arises from debility of the digestive organs. We have the authority of Dr. Jameson of its being a valuable lithonriptick, and that of Dr. Barton of its being an emmenagogue.

ALSINE, [*Red-Chick weed.*] The Herb.

THIS plant grows from twelve to eighteen inches high, with numerous branches of a reddish shade, bearing purple blossoms, succeeded by small shells containing fine seeds; and possesses an irritating, pungent taste.

Medical Properties.—Powerfully stimulating, and gently diaphoretick. The herb in powders in half tea-spoonful potions, or an infusion of the green herb taken freely, cures the hydrophobia, and is very serviceable in intermittents, epilepsies, cramp convulsion fits, spasms, &c. The dose should be repeated or increased, until relief is obtained.

This article should be cultivated in gardens, on account of its scarcity.

HEPATICA NOBILIS, [*Noble Liverwort.*] The Leaves.

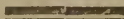
THERE are several species of this plant, but that which grows on dry land is preferable to that growing on rocks in the water. This plant is a production of most parts of the United States, and is generally known.

Medical Properties.—Gently stimulant, expectorant, and fluid-secreting. An infusion of the leaves drank freely, is a very efficacious remedy for the consumption, scrofula, coughs, catarrhs, &c. The leaves bruised and conserved in honey is however preferable.

(*Mistletoe.*) The Leaf.

THIS substance is found growing on limbs of trees, and continues green until winter. That which grows on oak timber is considered preferable.

Medical Properties.—Stimulating, nervine, and gently tonic. Taken in tea-spoonful doses of the powdered leaves, is particularly calculated to relieve epilectick fits, spasms, convulsions, and all debilitated cases of the nervous system.



HAVING completed the description of the most important vegetables intended for internal application; It is thought advisable to designate a few that are particularly calculated for external application. The following are the most efficacious.

IRIS VIRGINICA, [*Blue Flag, Flower de luce.*] The Root.

THE stalk grows from twelve to fifteen inches high, bearing blue flowers. The roots are about the size of the little finger, from four to six inches long, producing a powerful effect on the fauces, when chewed.

Medical Properties.—Anodyne, anticeptick, cathartick, and stimulating. The recent root bruised, or the dry root in powders, moistened with vinegar or a weak solution of alkali, and applied to the parts, cures felons, and removes rheumatic or sciatic pains. It is also an excellent application for gangrenous swellings, mortified sores, cancers, &c.; and relieves venereal pains. It may be used in small quantities as a cathartic, combined with mandrake root; one-fourth tea-spoonful is a sufficient dose.

PHYTOLACCA DECANDRA, [*Scoke Root, Garget Root, Poke Root.*]

SEVERAL stalks rise from the same root, of a reddish colour, five or six feet high, bearing white blossoms succeeded by purple berries.

Medical Properties.—Powerfully stimulating, cathartic and emetic. The root roasted and applied in the form of a poultice, or the leaves wilted, applied to gangrenous swellings, mortified sores, felons, cancers, sore breasts, biles, &c. gives immediate relief. The expressed juice of the leaves cures the itch, and ring-worms. A decoction of the root forms an excellent external application in all cases of torpor of the exhalents in dropsical cases, rheumatisms, and venereal pains. The root boiled, and the strength extracted and boiled down to the consistency of molasses, cures cancers, wens, and is very serviceable applied to carious bones.

DATURA TATULA STRAMONIUM, [*Jamestown Weed, Thorn-Apple.*]

THIS annual plant rises four or five feet high, with large branches bearing white flowers, succeeded by a thorny ball nearly as large as a hen's egg, containing black seeds of a poisonous nature.

Medical Properties.—Anodyne, and astringent. The leaves simmered in fresh butter to an oil, are an excellent remedy for the piles, scalds, burns, and irritable sores. The leaves bruised and applied to pains, swellings, hard inflamed tumors, sore eyes, wounds, nerves, &c. give great relief.

We have the authority of Professor Barton of its efficacy in maniacal cases, (*madness*,) but I cannot recommend the internal use of this powerful medicine, from experience. The green leaves wilted and applied to inflamed swellings, particularly the breasts of females, give immediate relief.

PODALYRIA TINCTORIA, (*Indigo Weed*.) The Leaves and Root.

THIS plant grows about two feet high, with long branches bearing white blossoms of a disagreeable smell. This plant bruised to a pulp, or simmered in fresh butter to an oil, is an excellent application for foul ulcers, irritable sores, painful swellings and cancers.

PAPAVER SOMNIFERUM, (*Poppy*.) The Leaves.

THIS plant is cultivated in gardens, and is generally known.

The leaves and flowers bruised, and applied to painful swellings, biles, &c., remove the pain; applied to the forehead, remove pain in the head.

RANUNCULUS ACris, (*Crowfoot, Butter-cups*.) The Root.

THIS plant grows ten or twelve inches high, bearing yellow blossoms. The roots are white and extremely irritating. The recent root bruised, and infused in spirits, makes an excellent wash for torpidity of the nervous system, rheumatic pains, palsies, &c. If applied for a considerable length of time, it excites blisters.

OF CHARCOAL, OR CARBON.

CHARCOAL of wood is generally made by putting the wood in a conical heap, and covering it with five or six inches of turf, or straw and dirt; leaving holes to admit a sufficient quantity of air, to support combustion, and only to dissipate the more light and volatile parts, consisting of

hydrogen, oxygen and acids; leaving the carbon (*the basis of vegetables*) one of the most durable substances, and the least susceptible of decomposition of any part of the vegetable or animal kingdoms.

Medical Properties.—Anticeptick, cathartic, and antacid. This is probably one of the most valuable anticepticks in nature, and is particularly serviceable in dysenteries; gangrenes, mortifications, costive habits, foul ulcers, scald heads, fetid breath, scrofulous gums, carious teeth, &c. The manner of its operation on the system is by absorbing oxygen, (*the principle of acidity and putrescency*), for which it has a strong affinity, and thereby neutralizing the septic acid and removing fœtor. Charcoal prepared from dogwood claims the preference for internal application. It should be used in potions from half to a table-spoonful in powders, and often repeated. Combined with equal quantities of whole mustard, and taken in table-spoonful potions once or twice in a day in molasses, and repeated for some time, removes the most obstinate constipation (*costiveness*) of the bowels: by adding golden-seal and lion's foot, snake-root, one fourth the quantity, removes dyspepsia. Few medicines claim the preference over this in the healing art; and it should be resorted to as the most safe and efficacious, in all cases where this class of medicines is indicated. In some inveterate cases of costiveness it should be given in as large quantities, and as often, as the stomach of the patient will bear.

Besides the great advantages derived from Charcoal as medicine, the artist, manufacturer and agriculturist, employ it with the most marked utility. It is successfully used in removing the burnt flavor of ardent spirits, and in neutralizing and depriving oil of its rancidity and noxious odour. Animal substances that have undergone a degree of the putrefactive fermentation, are rendered perfectly sweet by being covered with powdered charcoal: and when fresh meat has been kept for some time in warm weather, and emits a fetid smell, it may be purified by boiling it in water impregnated with charcoal, or by adding a shovel-full of live coals from the fire-place to the water at the commencement of the process; after a short time, the water should

be changed, and the process repeated. Fresh meat immediately inclosed in powdered charcoal remains for months in the warmer part of the season without undergoing any sensible degree of decomposition. It is from this indissoluble property of charcoal that arise the benefits of charring (*burning*) the ends of posts that are to be set in the ground: they should be charred ten or twelve inches above the parts sunk in the ground. It must be recollected that charcoal for medicinal purposes should be fresh made, and kept as much as possible from the air. Sugar maple probably makes the best charcoal for tooth powder, and should be diluted with weak vinegar, or vinegar and water, and daily used.

OF ENEMAS, INJECTIONS, CLYSTERS OR LAVEMENTS.

By these terms are meant liquid substances, which are introduced into the intestines by the rectum. Lavements form a very important application, and should be resorted to in every stage of disease of any considerable malignancy, as an indispensable application. With a view to impress more forcibly on the minds of readers the necessity of these administrations, I have thought proper to copy a few remarks from that renowned author, Dr. Jameson, in whose sentiments we most cordially concur.

“GLYSTERS are of vast importance in the practice of medicine; and many are lost by the neglect of this invaluable mode of administering remedies. Were I confined to one remedy for the cure of diseases, I should choose glysters. They are not only safe, but highly useful in every disease, in its forming stage. In dysentery, and many other diseases, no physician can acquit his conscience for an omission of this remedy. Every family should have an apparatus for this purpose, and view it as a matter of the highest importance to keep it in clean complete order. The best way, in general, is to have a syringe fixed in a stool: this enables the patient to use it without assistance; and this kind of syringes are to be had for a small sum, at the apothecaries, made of pewter, and are easily connected to a bench or stool.

But for children, or those who are too weak to sit up, the common instrument made of bladder and a small ivory pipe, should always be in readiness. All heads of families should make it a matter of the greatest importance, to save bladders in time of *killing*. There is no doubt, with me, but a very great number of persons are lost every year, in the country, for want of glysters; and this want arises from several causes, as the want of instruments, want of persons to administer this simple remedy, aversion to their use, and an omission on the part of physicians, arising, often, from the aversion or incapacity in the attendants, and sometimes from the want of knowing the vast importance of this remedy. In every family one or more persons should be competent to this business. Where modesty is likely to interfere, a small leather tube may be connected to the bladder and pipe, and carried under the bed-clothes by the patient.—We are enabled by glysters to evacuate the contents of the bowels, to sheathe and cool them, and thus allay pain and fever; to check a purging, &c.; and in cases where the patient is unable to take nourishment on account of swelling of the throat, or wounds, and other causes, we may nourish the patient, and thus save life till food can be taken in the usual way. Physicians! Nurses! Parents! Let me humbly admonish you, that this is a most important matter: for I have seen many cases, in country practice, where almost any thing would have been given for a bladder which could not be procured, and willingly would a hog, a sheep, or an ox, have been sacrificed for the bladder; but this, alas! would not answer, because the bladder must be dried. If it, then, really be a fact, that a life may be lost for want of a bladder, with how much care should we preserve them! And if they are so beneficial, why so childishly neglect their use, because, to those unaccustomed to them, they seem indelicate; but what has delicacy to do with matters which jeopardize human life?"

MEDICAL COMPOUNDS.

THE following is considered the better mode of compounding and preparing the vegetable medicines recom-

mended in this work, to remove disease and restore the lost energy of the nervous system. I will remark that, when all the particular articles recommended in the compound, cannot be conveniently obtained, others of the same class may be substituted, or a part omitted.

To save repetition, we have been particular, under the classification and description of medical botany, to designate what part of the substance is to be preferred, and the proper manner of preparing: for example—the roots only of mandrake, black cohosh, lion's-foot snake root, ipecacuanha, &c. (in powders, unless other preparations are mentioned;) carrot, angelica, &c., the seeds and roots; scurvy grass, sage, rue, &c., and most of the annual plants, the herb is principally used; elm, whitewood, aspen, &c., the inner bark of the body and roots, and the buds. If these few hints are duly attended to, they will afford sufficient directions, for the different preparations.

CATHARTIC POWDERS.

TAKE of the powders of mandrake, slippery elm and butternut, equal quantities; to be well mixed, and taken in tea-spoonful doses in sale molasses, to be repeated once an hour: in all cases of obstructions of the bowels, dysentery, cholera morbus, &c.

Another. Take ipecac, thoroughwort, culvert's physic, and slippery elm, all finely powdered, in equal quantities: to be mixed and taken in tea-spoonful potions, in molasses, and repeated every two or three hours, in all dyspeptic cases and costive habits.

Another. Take equal quantities of whole mustard seed, charcoal, golden-seal and mandrake, mixed and administered in potions from half to a table-spoonful, in molasses, and repeated once or twice a day. This is peculiarly calculated to produce a natural peristaltick motion of the bowels, and give tone to the digestive organs.

CATHARTICK PILLS.

TAKE equal quantities of butternut, white elder, boxwood and mandrake, all boiled in a sufficient quantity of water to extract their virtues. The clear liquor is then to be evaporated to the consistency of tar in a moderate heat, (*burning destroys its virtues.*) To be brought to a state of pilling by adding the powders of slippery elm, galengal, Indian cloves or ginger, and mandrake, equal quantities. To be rolled into pills about the size of peas, and taken in potions from one to four, and repeated as necessity requires. They are very efficacious in all obstructions of the alimentary canal, and dyspeptic habits.

Another. Take white ash bark, thorough-wort, and milkweed, equal quantities: to be reduced to the consistency of molasses, as directed in the above, and brought to a proper state for pilling, by adding equal quantities of the powders of slippery elm, alspice and valerian; to be taken as above directed. They are very efficacious in all debilitated cases of the nervous system, costive habits, &c.

CATHARTIC EXTRACT.

TAKE blue-flag mandrake, white ash, and black-cohosh, equal quantities, and extract their virtues and reduce them to the consistency of molasses, as above directed: to be taken in half tea-spoonful doses, in molasses. It removes the most obstinate cases of constipation of the bowels, (*costiveness.*) The potion to be increased, repeated or diminished, as the strength and circumstances of the patient require.

EMETICK EXTRACTS.

TAKE equal quantities of ipecac, lobelia seed, Indian cloves, mandrake and wild lettuce finely powdered and mixed with proof spirits in the proportion, of one quart to every three ounces of the powders. To be taken in tea-spoonful doses, and repeated once in ten or fifteen minutes,

until the wished for object is accomplished. To be administered in all cases of poison, or in any other case where this class of medicines is necessary.

RESTORING LAVEMENT.

TAKE beef's gall half a tea-spoonful, thorough-wort and gentian one tea-spoonful each, slippery elm two tea-spoonsful, hot water half a pint, to be infused twenty or thirty minutes, strained and sweetened. To be applied in cases of torpor of the bowels, and debility of the nervous system, and repeated as necessity requires.

ANODYNE LAVEMENT.

TAKE half a pint of linseed tea, two tea-spoonsful of lettuce laudanum, and two teaspoonsful of alspice made perfectly fine, and mixed. To be applied in all cases of nervous excitement, spasms, convulsions, dysenteries, &c.

Another. Take two tea-spoonsful each of the powders of slippery elm hops and ginger, and add one gill of hot water, to be strained, after the strength is extracted; then add a gill and an half of new milk: to be applied as the above.

LAXATIVE LAVEMENTS.

TAKE sweet oil two table-spoonsful, the powders of mandrake two tea-spoonsful, and one table-spoonful of common salt, to be added to half a pint of chicken soup, or water: to be applied in all cases of costiveness, inflammation of the bowels, &c. In cases of mortification two table-spoonsful of charcoal should be added to each application.

Another. Take one tea-spoonful of the powders of blood root, one of galengal, two of fresh butter, and two of ipecac, hot water half a pint. To be applied in cases of colick pains, and torpidity of the bowels.

STIMULATING LAVEMENTS.

TAKE half a tea-spoonful each of the powders of hercules, heall-all, gentian, blood root, Indian cloves, and the seeds of lobelia, all reduced to a fine powder, and added to a half pint of hot water. To be applied (when cool in two lavements,) in all cases of torpidity of the nervous system, palsies, rheumatick and sciatic pains.

Another. Take two tea-spoonsful of galengal, half a tea-spoonful of cayenne or red pepper, one tea-spoonful of the powders of blue flag, and one tea-spoonful of lobelia, all made fine and added to half a pint of hot water; and applied as the above.

ASTRINGENT LAVEMENT.

TAKE two tea-spoonsful each of the powders of crane's-bill, alspice, ginger and valerian; add half a pint of hot water. To be strained, and applied in all cases of a relaxation of the bowels, dysenteries, &c.

Another. Take one table-spoonful each, of the powders of bay-berry, common salt, winter brake, boxwood, and Indian cloves or galengal, and add half a pint of water: to be applied as above.

MUCILAGINOUS LAVEMENT.

TAKE of the powders of slippery elm one table-spoonful; lion's-foot-snake root, and mountain flax, two teaspoonsful each; lettuce laudanum one tea-spoonful, added to a half pint of flaxseed tea: to be applied in cases of the flux, dysentery, &c., and all cases of irritation of the bowels.

Another. Take a strong decoction of marsh mallows or comfrey, and add two tea-spoonsful of the powders of hops, ginger and soap-wort: to be applied as the above.

ANTICEPTICK LAVEMENTS.

TAKE gum myrrh, charcoal, and common salt, one table-spoonful each; vinegar and water half a pint: to be applied in all cases of mortification of the bowels, putrid fevers, or in any other case where mortification is apprehended. This is one of the best anticepticks probably yet known: it should also be applied externally, and may be taken into the stomach in small quantities.

Another. Take one table-spoonful each of ginger, common salt, and boxwood, half a tea-spoonful of alkaline salts; to be added to half a pint of nettle juice, or a strong decoction of the herb, or water: to be applied as the above.

NUTRIENT LAVEMENTS.

TAKE beef cordial, which is made by cutting fine the leaner parts of fat beef, and putting it into a bottle stopped tight, without water, and boiling it in a kettle of water two or three hours: remember to put the bottle into the water when cool, and the cork to be put in loose, to permit the air to pass off as it expands by heating; after the water boils the bottle may be stopped close. The liquor that is extracted is one of the purest nutritious substances, and is particularly serviceable in all debilitated cases of the digestive organs; also to be applied as a lavement. Soups, jellies, broth, gruel, or any other liquid nutritious substance, may be administered to the bowels in all cases of debility of the digestive apparatus, or obstructions in the œsophagus.

MUCILAGINOUS CATHARTIC.

TAKE equal quantities of comfrey root and white oak bark, and boil them in a sufficient quantity of water to extract the strength; strain and reduce the liquor to the consistency of molasses; then add the powder of mandrake sufficient to bring it to the thickness of honey. To be taken in potions from half to a table-spoonful in molasses, in all dysenteric cases, costive habits, dyspepsia, cholera morbus, &c.; the quantity regulated as circumstances require.

DROPSICAL EXTRACTS.

TAKE equal quantities of black ash bark and elder roots, and extract the strength, and evaporate it to the consistency of thin molasses; to be added to an equal quantity of elderberry molasses: then add the powders of mandrake and scorched egg-shells, equal quantities, sufficient to bring it to the thickness of honey. To be taken in doses from half to a table-spoonful, and repeated according to circumstances. This is a very efficacious remedy for the dropsy, and torpor of the stomach and bowels.

DROPSICAL POWDERS.

TAKE equal quantities of mandrake, egg-shells, and jalap, in powders: to be taken in potions of one or two tea-spoonful in molasses, several times a day. This preparation is peculiarly calculated to excite action of the secretory and excretory vessels, and to remove the superabundance of water in dropsical cases.

DROPSICAL CORDIAL.

TAKE equal quantities of elecampane, comfrey, horse-radish root, smart-weed, queen-of-the-meadow, and mandrake, four quarts; add four gallons of water, and boil it a sufficient length of time to extract the strength; then strain off the liquor, and add one pint of honey, and boil it down to two quarts; then add half a pint of pulverized mustard, and bottle it for use. To be taken in table-spoonful potions, several times a day; the quantity may be increased to half a wine-glass full, when the strength of the patient will admit. To be administered in all dropsical cases, suppression of the urine, cramps, spasms of the gravel, &c.

STIMULATING TONICKS.

TAKE equal quantities of the powders of hercules, golden-seal, gentian and mandrake, two ounces, and infuse in one quart of spirits: to be taken in table-spoonful potions three times a day, a little before meals. The quantity should however be reduced in debilitated cases, and diluted with

water and sugar. This is particularly serviceable in all cases of torpor and debility of the nervous system, palsies, epilepsies, dyspepsia, &c.

RESTORING TONICKS.

TAKE equal quantities of the powders of whitewood, peach kernel, unicorn, golden-seal, and cucumber seeds, three ounces: to be infused in one quart of spirits, and taken in potions from one tea-spoonful to a table-spoonful, several times a day, before meals. This is an excellent tonick in all debilitated cases of the digestive organs, when the more stimulating tonick would be inadmissible.

GENERAL RESTORATIVE.

TAKE two ounces each of Columbo, skunk cabbage, golden-seal, female flower, unicorn, alspice, white Solomon-seal, spikenard, & deer's horn in the velvet three, ounces of bitter-sweet, and one ounce of gentian in powders; to be added to one gallon of spirits. To be taken in potions from a tea-spoonful to half a wine glass full, three times a day, before meals. This preparation is particularly calculated to restore tone to the digestive organs, after the equilibrium is established.

ANTI-DYSPEPTICK PILLS.

TAKE ipecac, mandrake, thorough-wort, and prenanthes, equal quantities, combined with half the quantity of the powders of slippery elm, and one fourth the quantity of peach or cherry tree gum; after being made fine and sufficiently moistened with water, they are to be made into pills of common size, and taken from one to four on going to bed, and continued for a considerable length of time: it excites action of the parietes of the stomach, promotes digestion, and stimulates the intestines to a natural motion.

SUDORIFIC POWDERS.

TAKE equal quantities of the powders of mountain flax, galengal, Indian cloves, ginger, and mandrake: to be taken in tea-spoonful doses in warm water, sweetened, and repeated once in twenty or thirty minutes, until relief is obtained. This medicine is calculated for a general application in all diseases and stages, with little variations.

Another. Take equal quantities of the powders of sassafras, unicorn, cuckold, rag-weed, butterfly [root]: to be taken in half table-spoonful potions in warm water, and repeated every fifteen or twenty minutes. They form a valuable sudorifick, and may be freely used in any disease, particularly in fevers and obstructions on the exhalants.

Another. Take Virginia snake root, plantain, and the seeds of burdock, equal parts, in powders, in potions of one or two tea-spoonfuls, in warm water. Very serviceable in fevers, and all obstructions of the system.

ANTI-COUGH POWDERS.

TAKE of blood-root one part, crane's-bill three parts, and elecampane two parts, all to be reduced to a fine powder, and mixed: to be taken in doses from half to a tea-spoonful in honey, several times a day. Removes coughs, and promotes digestion.

EXPECTORANT POWDERS.

TAKE equal parts of the powders of Seneca snake-root, skunk cabbage, and mandrake root: to be taken in potions of one half tea-spoonful, in cold water, or honey, and repeated once in ten or fifteen minutes; excites action of the glands of the mouth and its mucous membrane, and promotes expectoration or spitting. It relieves asthmatic affections, strictures of the lungs, and coughs.

EXPECTORANT CONSERVE.

TAKE Indian turnip, horse-radish, and cowfoot, equal parts, added to three times its quantity of honey or loaf sugar; and simmered in a close vessel for half an hour: to be taken in potions from half to a tea-spoonful, several times a day. This is an excellent remedy for the asthma, coughs, consumptions, catarrhs, &c.

SALIVATION POWDERS.

TAKE equal parts of the powders of mandrake root, cowfoot, blood root and the seeds of lobelia: to be taken in one fourth tea-spoonful doses, in cold water, and repeated once in fifteen minutes,—produces a salivation equal to calomel, without any of its deleterious effects. It completely removes all obstructions of the glands of the throat, strictures of the chest, and gives great relief in the asthma, coughs, catarrhs, and consumptions.

DIURETICK POWDERS.

TAKE turpentine root, queen-of-the-meadow, wild lettuce and the seeds of burdock; to be reduced to a fine powder, and taken in potions from half to a table-spoonful in warm water, and repeated every fifteen or twenty minutes. It gives relief in all cases of suppression of the urine, and is serviceable in gravelly complaints.

DIURETICK SOLUTION.

TAKE mustard seed, scorched egg-shells, and mandrake, root in powders, equal parts, and two parts of the recent root of horse-radish scraped fine, all well mixed; add one quart of this preparation to one gallon of the best of cider, bottled and kept from the air. To be taken in potions from half a table-spoonful to half a wine glass full, and repeated according to the circumstances of the case. It relieves suppression of the urine, paroxysms of the gravel, and is very serviceable in palsies, agues, scurvies, and particularly for the dropsy.

ANTI-DYSENTERIC POWDERS.

TAKE of the powders of mandrake root, slippery elm, and charcoal, and the powders of egg and salt prepared in the following manner: Take a new laid hen's egg, break the end and turn off the white, and fill the shell with common salt, mixing it with the yelk; to be placed in a moderate heat & scorched like coffee, & then powdered & mixed with the other ingredients in equal quantities. To be taken in potions of a half table-spoonful, in sale molasses, and repeated as necessity requires. This is probably one of the most efficacious remedies for the dysentery or flux yet discovered. It is also very serviceable in cases of the cholera morbus.

ANTICEPTIC EXTRACTS.

TAKE of the powders of myrrh, camphor, Virginia snake root, and boxwood, three ounces, to be added to one quart of alcohol: and applied to all gangrenous swellings, inflammations, mortified sores, &c. It is also very efficacious, applied to the bowels in all cases of inflammations, and mortifications.

STYPTICKS.

TAKE equal quantities of the powders of crane's-bill; winter brake and cobwebs; to be moistened with cold water, and applied to bleeding orifices; it contracts the parts, and stays the discharge.

Another. Take brandy or good spirits one gill, castile soap half an ounce, and pearlash one fourth of an ounce; shave the soap fine and dissolve it in the brandy; then add the pearlash, and mix them well together: to be kept in bottles closely stopped, for use. When applied, warm it by the fire, and dip lint into it, and apply it to a bleeding wound. It causes the blood to coagulate, and stops its bleeding.

MINERAL SOLUTION.

TAKE equal quantities of green copperas, white vitriol, common salt, and gunpowder made fine, four table-spoon-

fuls; soft water three half pints: to be infused until perfectly dissolved; then strain and bottle it for use. This constitutes an excellent external application in all cases of painful swellings, sprains, bruises, rheumatick pains, gangrenous inflammations, head-ache, broken bones, cancers, &c. If the preparation is too strong, it may be diluted with water. It is also successfully employed as an ophthalmick, properly diluted.

HEMORRHOIDS OINTMENT.

TAKE the recent leaves of stramonium, mullein flowers or roots, and the green bark of elder, one handful each, to be added to half a pound of fresh butter, and simmered over a slow fire to a crisp; then strain the oil, and keep it from the air for use: to be applied to the parts several times a day, in small quantities. This is remarkably calculated to give relief in cases of soreness, and painful irritations of the parts.

Or, take the roots of burdock, the tops of garden mallows, catnip, and scoke leaves, one handful each; to be simmered in half a pound of fresh butter, strained, and applied as directed for the above. In cases of a protrusion of the rectum, apply a poultice of white beans as warm as can be conveniently borne, (first putting bark on the parts if practicable;) and occasionally apply a lavement of bean water, together with the astringents, to prevent its return.

CHALYBEATE SOLUTION.

INFUSE one pint of powdered blacksmiths' cinders, in a quart of spring water: to be drank several times a day, from half to a wine glass full at a time. This a very efficacious remedy for the piles.

To stop bleeding at the nose.

TAKE a handful of feathers, and put them on a shovel of burning coals, and apply the smoke to the nose: this gives immediate relief. When applied in cases of flooding or bleeding piles, the patient should sit over the smoke.

CONSUMPTION CONSERVE.

TAKE of upland liverwort two parts, and mountain flax one part; to be bruised and added to an equal quantity of honey, and simmered one hour, strained, and put into a close vessel for use. To be taken in potions from half to a tea-spoonful, several times a day, according to the circumstances of the case. An infusion has a similar effect. This is a very efficacious remedy for the consumption.

RESTORING SALVE.

TAKE half a pint each, of wintergreen, stramonium, and the green bark of elder bruised; and one gill each of turpentine, fresh butter, honey and mutton suet: simmer them together in a close vessel to an oil; to be strained and kept from the air for use. This constitutes one of the most efficacious applications for recent wounds, old sores, scalds, burns, yet known.

Or, take equal quantities of mutton tallow, beeswax, scoke leave or root, balsam of fir, and wintergreen, all simmered together until the leaves are crisped; to be strained, and applied as the above.

ANODYNE LINIMENT.

TAKE equal parts of hops, wild lettuce, and stramonium, to be simmered in an equal quantity of nect's foot oil; then strain and add to every pint half an ounce each, of the oils of rosemary and pennyroyal: to be closed from the air, and kept for use. This is a very valuable liniment for rheumatick pains, sprains, broken bones, contracted tendons, & for burns.

Or, take strong lime water, and add an equal quantity of sweet or linseed oil, and add half an ounce of spirits of turpentine to every pint. This is particularly serviceable for burns, scalds, and all irritable sores.

ANTHALMENTICK EXTRACT.

TAKE equal parts of senna leaves, oak of Jerusalem, and spear-mint: infuse one ounce in half a pint of water in a

close vessel. To be taken in table-spoonful potions, sweetened with sale molasses. This is a valuable medicine to remove worms. Spear-mint tea often proves a valuable vermifuge and stomachick. It should be repeated every half hour, until it gives relief.

Or, take equal parts of the powders of mandrake root and cedar balls, in half tea-spoonful potions, in molasses; to be repeated as circumstances require.

RHEUMATICK ANODYNE.

TAKE one pint each of alcohol and beef's gall, and one ounce of the oil of sassafras; to be well mixed together and bottled for use. To be externally applied in all rheumatick pains, gouty affections, bruises, gangrenous inflammations, scalds, burns, stiff joints, and contracted tendons. This preparation is peculiarly calculated to relieve pain, and give tone to the parts.

RHEUMATICK OINTMENT.

TAKE the recent leaves of stramonium, scoke, and hop flowers, equal parts, bruised, and simmered in an equal quantity of fresh butter until the leaves are crisped; then strain off the oil, and add to every quart one ounce of the oil of hemlock. To be applied as the above.

CALOUS OINTMENT.

TAKE dog's oil one pint, angle worms half a pint, bitter-sweet (bark of the root,) and chamomile flowers half a pint; to be simmered over a slow fire until the strength of the substances are extracted; then strain off the oil, and add one ounce of rattlesnake oil to each quart. This ointment is a very serviceable application to stiff joints, contracted tendons, wens, and sciatic and rheumatick pains.

CANCER SALVE.

TAKE equal quantities of young scoke roots and mandrake roots, to be boiled in a sufficient quantity of water to extract the strength; then strain and boil it down to the consistency

of molasses; to which add half a pound of fresh butter and one ounce of pearlash to each quart: to be well mixed, and bottled for use. To be applied to cancers, mortified sores, carious bones, wens, &c. The application should be repeated several times a day, until the parts assume a healthy appearance. If the preparation is too powerful, it may be diluted with fresh butter, more particularly after several of the first applications.

Or, apply the gastrick juice from the stomach of a dog killed in a fasting state, or a part of the stomach. This is one of the most powerful solvents in nature, and will dissolve fungous flesh, and callous or indurated edges of cancers. It is also an excellent antiseptic, and is a very valuable application for mortified sores, foul ulcers, carious bones, &c.

CATAPLASM FOR THE GOUT.

TAKE black cherry-tree bark, and boil it in a sufficient quantity of water to extract the strength; strain it and boil it down to the consistency of common sirup; then add one fourth of a pound of alum to two quarts of the sirup. To be applied to the feet and legs, or affected parts: then apply a poultice of blue clay, moistened and kept wet with the sirup; to be changed twice a day. This application will relieve pain in the most obstinate cases of the gout, or in other painful swellings; and will cleanse old sores, and cause them to heal.

STIMULATING POULTICES.

TAKE equal quantities of bruised mustard seed, the recent root of horse-radish scraped fine, and Indian meal moistened with vinegar: to be applied to palsied or decayed limbs, rheumatick or sciatic pains; or to the feet in all debilitated cases in fevers, &c.

CARROT POULTICE.

TAKE carrot and scoke root, grated fine, equal quantities, and a sufficiency of good yeast to bring it to the consistency of a poultice: to be applied in all cases of gangrenes, mortifications, cancers, foul ulcers, &c.

SLIPPERY-ELM POULTICE.

TAKE recent bark of slippery elm, bruised, in cold water; or the dry bark in powders, and moistened with vinegar. This is an excellent application for strains, recent inflammations, to prevent suppuration, and for sore eyes. Bread and milk boiled to a proper consistency; Indian meal moistened with cold water, or boiled; flaxseed boiled and thickened with Indian meal; the roots of the white pond lily; onions boiled soft, mashed in milk, and thickened with Indian meal; beans ground and moistened with vinegar sufficient to make a poultice,—are all good emollients for strains, bruises, recent inflammations, gangrenous swellings, &c.

OPHTHALMICK SOLUTION.

TAKE of white vitriol and pearlash each one table-spoonful, alum and loaf sugar two table-spoonfuls each, and the white of three hens'-eggs well beaten, all mixed with one pint of soft water: after they are completely blended, it is to be strained several times through a linen cloth, to render it clear, and bottled for use. This is a valuable application for all chronic cases of sore eyes—to be applied several times a day. If it is too strong, it may be diluted with water.

Another. Take one table-spoonful each of white copperas, white vitriol and pearlash, and three table-spoonful of common salt, to three pints of soft water; to be scalded over a slow fire a few minutes, and bottled for use. Drop a little into the eye two or three times a day. This is a very efficacious remedy for sore eyes: it removes inflammation, and restores sight.

The juice of rotten apples put into the eyes, a few drops at a time, often has a good effect in restoring dull sight. A liniment made of equal parts of a strong lime water and sweet oil, is a remarkably good remedy for inflammations of the eye, in particular where the eyelids incline to stick together. A mild solution of alkaline salts is a very efficacious application for inflamed eyes. The oil of peppermint applied to the cheek a little below the eye, is a very serviceable remedy: the oil of marjoram has a similar effect.

Milk and water, equal parts: the milk should stand a few hours, and have been once skimmed. This application, if thoroughly attended to, will relieve the most inveterate cases; a little saffron improves its efficacy. Rose water is a mild astringent, and serviceable in chronic cases of sore eyes.

NERVE OINTMENT.

TAKE mustard seed one gill; horse-radish roots, bitter-sweet, chamomile flowers, sassafras, red pepper and wild lettuce, all well bruised, half a pint each: to be added to one pound of fresh butter, one quart of spirits, and half a pint of sweet oil, and simmered in a close vessel until the substances are crisped; then strain and bottle it for use. This is a very efficacious remedy for located pains arising from broken bones, rheumatism, poison, sprains, or from mercury, &c.

FEBRIFUGE.

TAKE of Virginia snake root, rag weed, mandrake, plantain, and mountain flax, in powders, equal parts. To be taken in tea-spoonful potions, with the addition of one fourth of a tea-spoonful of alkaline salts in a tea-cup full of warm water: to be repeated every fifteen or twenty minutes, in all cases of fever: also to be applied to the bowels in twice the quantity.

Or, take equal parts of lion's-foot snake root, seneka snake root, sassafras, thorough-wort, ginger, and ipecac, in powders. To be taken in potions from one to two tea-spoonsful in a tea-cup of warm water.

Or, take horse-radish root scraped fine one pint, infused in one quart of well fermented cider, or vinegar and water, for several days: to be taken in table-spoonful potions, and repeated every half hour. This is a valuable febrifuge, and may be freely given in cases of fever.

Or, a strong decoction of butterfly root drank freely, is an excellent febrifuge.

During these administrations, the body should be frequently bathed with the alkaline wash. This is also to be taken in potions of one fourth of a tea-spoonful, properly

diluted; and applied as a lavement in quantities of one tea-spoonful in half a pint of rain water.

RHEUMATICK POWDERS.

TAKE equal parts of the powders of black cohosh, mandrake and mountain flax, in potions from half to three fourths of a tea-spoonful in warm water: to be repeated once an hour or oftener, according to the necessity of the case. A tea-spoonful of lettuce laudanum may be added to each dose as an anodyne, in the most severe cases. This preparation removes all obstructions of the system, excites actions of the glandular secretions, and removes rheumatick pains.

ANTI-HEMORRHAGICK.

TAKE equal quantities of sage and nettle leaves, bruise them and express the juice; to be taken in doses from one to two tea-spoonfuls two or three times a day: or a strong infusion drank freely, stops bleeding at the lungs or stomach when continued for a considerable length of time: or fine salt in a dry state in table-spoonful potions, and repeated once an hour (water should not be drank immediately after) gives immediate relief. Or, take a strong decoction of witch-hazel leaves, to be drank freely, or the recent leaves chewed, stops bleeding at the stomach.

COMPOUND ESSENCE OF SPIKENARD.

TAKE half an ounce each of the oils of spikenard, angelica, savin, wintergreen, sassafras, rosemary, and henlock; to be combined with a sufficient quantity of alkohol to dissolve the oils: to be taken in potions of fifteen or twenty drops, in a strong infusion of mullein roots, several times a day. This is a very efficacious medicine for all debilitated cases of the nervous system, consumptions, asthmas; and particularly for women to take for several weeks before their confinement. It is also very serviceable in removing after-pains, female obstructions, &c., being particularly calculated to regulate the female system.

ANODYNE POULTICE.

TAKE of poppy heads, leaves or blossoms, scoke leaves or roots, stramonium leaves, and persicaria (smart-weed,) equal parts, bruised, and moistened with vinegar. This is an excellent anodyne, and gives immediate relief, when applied to contusions, sprains, biles, white swellings, fever sores, gangrenous inflammations, and sore breasts.

TINEA OINTMENT.

TAKE four ounces each of rosin, beeswax, honey and verdigris, half a pound of turpentine, one pound of fresh butter, and three ounces each of tar and mutton tallow: to be melted and well mixed together. This is a very efficacious remedy for the scald head: to be applied several times a day; at each application wash the head with a strong castile soap suds, and apply powdered charcoal. It is also an excellent application for any scrofulous humor, salt rheum, tetters, &c.

Or, take equal parts of fresh butter, the yolks of roasted eggs, and the bruised leaves of wintergreen; to be simmered together in a close vessel until the herb is crisped, to be strained and kept from the air: and applied as the above. This is an excellent remedy, and will generally cure the most obstinate cases. It is also very serviceable, applied to old sores, foul ulcers, &c.

OPODELDOC.

TAKE the best castile soap shaved thin, four ounces, camphor one and an half ounce, alkohol one pint; dissolve the soap in the spirits, then add the camphor and half an ounce of the oil of pennyroyal. This is an excellent application for burns, scalds, sprains, &c.

SHIELDING PLASTER.

TAKE equal parts of the roots of white Solomon seal, spikenard, comfrey, and sarsaparilla, and boil them in a sufficient quantity of water to extract the strength; then strain, and evaporate it over a moderate heat to the consist-

ency of molasses; then add white pine turpentine and rosin, equal parts, to bring it to the consistency of shoemakers' wax. To be spread on thin leather or some flexible substance, and applied to weak backs, on to the side, stomach, or any located pains. These applications are much more serviceable in the healing art, than has been generally considered. They are indispensable, in all weak and debilitated cases, to remove a portion of the pressure of the atmosphere; to impart to the absorbents a degree of stimulus, and to aid in restoring tone to the parts.

CEPHALIC SNUFF.

TAKE the bark of the root of baberry, the flower of hops, and golden-seal, equal parts, finely powdered, and sifted through book muslin, scented with the oil of cinnamon, or lavender, and bottled for use. To be used in cases of torpor of the mucous membrane that lines the nose. This is particularly calculated to relieve pain in the head.

Or, take of the bark of the root of wandering milk-weed two parts, and sage leaves and white hellebore one part each; prepared and applied as the above.

DENTIFRICE POWDERS.

TAKE charcoal made of willow or sugar maple, three parts, and baberry one part; to be moistened with equal quantities of vinegar and water: to be applied two or three times a week to the teeth. This will give them a beautiful white appearance, and render the breath sweet. The mouth should be rinsed every morning in vinegar and rose water, or salt and water; also after meals. Spring water may be substituted.

Or, take gum myrrh, alum and charcoal, equal quantities, diluted with soft water: applied as above directed.

ANTI-SPASMODICK ELIXIR.

TAKE of the oils of cinnamon, sassafras and angelica, one ounce each, and alkohol three quarts; infuse for twenty-four hours; then add Russian castor, Indian cloves, and unicorn, in powders, two ounces each: to be taken in potions from

fifteen to thirty drops, in a strong mullein-root tea, three times a day. This is a very efficacious remedy for epileptic fits, spasms, and debility of the nervous system. It should be continued for a considerable length of time.

Or, take red chick weed, mistletoe, unicorn and mandrake in powders, one ounce each: to be taken in potions from one to two tea-spoonfuls, three or four times a day.— This is a valuable remedy for convulsive fits.

Or, take two quarts of spirits, and a handful each of mandrake roots, angelica roots, sassaparilla bark, cinnamon bark and valerian; to be put into a vessel inclosed from the air, and steeped until half evaporated. To be taken in table-spoonful potions several times a day. This is also a valuable medicine for fits, and should be used occasionally for a change, while taking the other preparations.

CIDER EXTRACTS.

TAKE ten gallons of the best of well fermented cider, two gallons of horseradish finely scraped, one quart each of mustard seed and mandrake roots, and two quarts of elecampane roots, in powders: to be infused for ten or twelve days. To be taken in half or whole table-spoonful potions, several times a day; and in violent cases two table-spoonfuls may be given at a time. This preparation is particularly serviceable in all dropical cases, rheumatick and sciatic affections, palsies, agues, convulsive fits, gravel, &c.

EMOLLIENT OINTMENT.

TAKE fresh butter and wintergreen leaves, half a pint each, and simmer them until the leaves are crisped; then strain, and add two ounces each of sweet oil and hartshorn: to be kept from the air for use. This is remarkably calculated to allay pain in any irritable sore from scalds, burns, &c.; or for sore breasts and nipples attended with pain and inflammation. It is also efficaciously employed for the salt rheum, cracked or chapped hands, or any hard and dry sore.

GENERAL EMMENAGOGUE.

TAKE four ounces of female flower, one ounce each of black cohosh, blue cohosh and Seneca snake root, half an ounce of blood root, one ounce each of vervain roots, burdock seed and saffron flowers, and half an ounce of hercules—all in powders; to be infused in two quarts of spirits. To be taken in table-spoonful potions several times a day, according to the circumstances of the case. This preparation is particularly calculated to remove all female obstructions and hysterical affections. During the administration, drink freely of a tea made of two-thirds bittersweet and one third cucumber: this preparation ought to be taken for some time after the complaint is removed.

EMMENAGOGUE EXTRACT.

TAKE alcohol one quart, oil of savin one ounce, to be infused twenty-four hours; then add one gill of the expressed juice of blood root, one gill each of bruised fennel seed, birth root and mandrake root. To be taken in potions from one fourth to half a tea-spoonful, and repeated as necessity requires. This is an excellent preparation to remove obstructions of the female system, arising from general debility, and for hysterical affections.

Or, take black cohosh, mandrake and unicorn, the roots, one ounce each, and the leaves of savin or juniper two ounces; to be mixed, and taken in tea-spoonful potions, and often repeated, in all cases of female obstructions and hysterical affections.

ANTI-COLICK POWDERS.

Take of angelica, unicorn, Indian cloves, butterfly root, and galengal or ginger, equal parts, in powders. To be taken in tea-spoonful potions, in warm water, and repeated once in ten or fifteen minutes. It generally gives relief in all colick pains. It is also to be applied to the bowels as an enema, in twice the quantity. It also removes flatulency, and restores digestion.

Or, take a turf one foot square from a nearly rich soil, and bury it in the embers before the fire until it is thoroughly heat; then moisten it with vinegar, and apply it to the bowels as warm as the patient can conveniently bear. This has given relief after all internal applications have failed.

RESTORING CORDIAL.

TAKE one pound each of whitewood, comfrey, spikenard, mullein, peach-tree bark, and golden-seal, in a green state, bruised; to be put into a crock with four times its quantity of water, inclosed from the air with a paste, and baked in an oven in a moderate heat until one half is evaporated; then strain off, and add honey or sugar, and spirits, to suit the patient: to be bottled and kept for use. To be taken in potions from half to a wine glass full, three times a day, as a restorative after the disease is removed; and in all debilitated cases of the nervous system, consumptive habits, &c.

DIABETEC EXTRACTS.

TAKE of the bark of the root of rose willow, and sumac berries, equal quantities, three ounces, & brandy one quart; to be infused for several days, and taken in table-spoonful potions, several times a day—the quantity to be varied according to the circumstances of the patient. This is a very efficacious remedy for the diabetes, being particularly calculated to strengthen the urinary organs, and promote healthy secretions.

SYPHILIC DECOCTION.

TAKE equal quantities of the shavings of lignum vitæ, the bark of the root of sassafras, and the roots of sarsaparilla; to be infused in a close vessel, and made about as strong as common chocolate, and drank freely. This is calculated more particularly for the first stages of the venereal. If the patient has been salivated, the preparation should be much stronger. It is also very serviceable in all cutaneous diseases.

CONSUMPTION SIRUP.

INFUSE one handful, each of the leaves of hoarhound, sage, liverwort, hyssop, and mullein roots, in four quarts of water, in a close vessel, until one half is evaporated; then strain the liquor, and add one quart of honey, and half a pint each of Indian turnip and elecampane roots, well bruised; to be simmered down to two quarts. To be taken in half table-spoonful potions, several times a day. This is a valuable sirup in all cases of the consumption, asthma, coughs, &c.

JAUNDICE BITTERS.

TAKE equal quantities of black cherry, whitewood, boxwood, the barks, and the roots of mandrake—all dried, pulverized and mixed: infuse three ounces of the powders in one quart of spirits. To be taken in table-spoonful potions three or four times a day. In the morning take a couple of hens' eggs, beat and mixed with new milk. This course, if duly attended to, will relieve the most obstinate cases of the jaundice. It is also very serviceable in dyspepsia, and debility of the digestive organs.

OINTMENT FOR DEFECTIVE HEARING.

TAKE one gill of peach kernel, half a pint of fresh butter, and half a cake of the best castile soap; to be simmered over a slow fire until the kernel is crisped; then strain off the oil, and add it to one gill of a strong essence of lobelia, prepared by infusing for several days, two table-spoonful of the pulverized seeds of lobelia, and one table-spoonful of powdered myrrh in a gill and an half of alcohol, and straining it;—to be well mixed together, and bottled for use. To be applied to the ear, three or four drops at a time, several times a day, in all cases of defective hearing. It may be proper to apply a little wool moistened with the same to the ear, to prevent the pressure of air on the parts. Washing the ear with castile soap suds once a day, accelerates a cure. Salt-water bathing is a good auxiliary in all cases of this kind.

NERVINE EXTRACT.

TAKE of vervain roots, sweet medley, elecampane, scoke berries, lignum vitæ, prickley ash bark, the saw-dust of pine knots, and black snake root, in powders, one quart each; to be added to eight gallons of good rectified whiskey. To be taken in doses from half to a table-spoonful, three or four times a day. This is remarkably calculated to relieve after-pains, and all female obstructions, child-bed fever, cold feet; and is particularly useful in debilitated cases of the nervous system, pain in the limbs, &c.

ALKALINE WASH.

TAKE one ounce of alkaline salts, (*pearlash*,) and dissolve it in three pints of soft water: to be applied to the surface of the body in all cases of fever, dry and parched skin, torpidity of the exhalents; also occasionally during the administration of the vapor bath. This is a very important application in the healing art; being calculated to neutralize acetic acid, dissolve coagulated fluids, excite action of the excretory vessels, and promote a discharge of excrementitious substances.

For a draught, take from one third to one half of a tea-spoonful, dissolved in half a pint of water.

It neutralizes acidity, liquefies gelatinous & mucous substances in the stomach, and promotes perspiration. It should not be continued for any considerable length of time, on account of its relaxing qualities.

LIME WATER.

TAKE four ounces of the best quick-lime, and sprinkle on water until the lime is slacked; then add two quarts of soft water, and stir it well, and let it stand until it settles and becomes clear; then pour it off immediately, bottle and confine it from the air, or the lime and water will separate. To be taken from two table-spoonsful to a wine-glass full, and frequently repeated. It has a similar effect on the fluids of the system, as the alkali, and is not so relaxing to the stomach. It however should not be continued for more than one or two weeks at a time.

It may be considered important, previously to entering upon the treatment of disease, to give some general directions for their prevention, as, to quote the expression of the illustrious Mitchill, 'one ounce of prevention is worth a pound of cure.'

Regularity and Simplicity should be strictly enjoined as the great and principal sources of health. Under these comprehensive terms may be included food, drink, exercise, clothing, sleep, and all the passions; or whatever may be calculated to debilitate the nervous system;—which, in connection with a vitiated atmosphere, may be considered the source of disease.

During the hotter parts of the season, particular attention should be paid to cleanliness: the baths should be applied two or three times a week, in addition to the alkali wash—not only for the purpose of removing filth from the surface, and giving tone and energy to the nerves; but also to impart to the system through the absorbents, alkaline substances to neutralize the acid already absorbed. The diet should consist principally of vegetables, with the addition of a small proportion of the fatter parts of salted animal substances. Fat salted pork is probably the best, & should be broiled and eaten daily, and occasionally with a little vinegar and pepper. Mutton soups, with a large proportion of vegetables and a proper quantity of seasoning; fowls, eggs, and milk with puddings composed of corn meal, should constitute a considerable portion of diet. Salt fish may be eaten two or three times a week for a change; and beans, onions and peas used occasionally. Fresh meat should be kept some time before it is cooked, to become tender and more digestible: care should however be taken to prevent putrescence, by covering it with powdered charcoal, or by placing it in an ice-house or a deep well. Unripe or decayed fruit of all kinds, and cherries, plums, &c. even when ripe, are highly noxious, and should be carefully avoided.

Costiveness should be viewed as a source of disease, and remedied on its first indication, by a daily use of equal quantities of charcoal and whole mustard seed, and one fourth the quantity of the powders of mandrake root, in table-spoonful potions, in molasses or water; which should be repeated as necessity requires. If acid eructations accompany the costive habit, the lime water in table-spoonful

potions, should be administered several times a day, and frequently applied to the bowels as a lavement, in quantities from one half to a gill, combined with an equal quantity of new milk. Or, take alkaline salts dissolved in one gill of water, in potions of one third of a tea-spoonful for the stomach, or twice as much for the bowels. The quantities recommended are designed for adults, of ordinary constitutions and strength; and should be varied according to the age and circumstances of the patient.

Many attempts have been made to fix precise potions for persons of different ages; but it is perfectly idle and preposterous to lay down any undeviating rules as to quantity; as every person of common observation must be aware that much depends on the constitution, habits and state of the patient. A few general rules, however, may be noticed as a guide under ordinary circumstances; but much must be left to the discretion and judgment of the administrator, who must vary the quantity as the constitution and strength of the patient seem to indicate. The smallest prescribed doses, in ordinary cases, should be first administered, then repeated or increased as necessity requires; remembering to err rather on the side of prudence.

For a person, from twelve to eighteen years of age, three fourths the quantity directed for an adult may be given.

From seven to twelve years, one half: from three to six, one fourth: from one to two, one sixth: under one year, about one eighth. Females require a little less than males.

WEIGHTS AND MEASURES OF LIQUIDS.

A pint contains one pound; a table-spoonful is about half an ounce; a tea-spoonful is about one fourth of a table-spoonful. Seventy drops are considered a tea-spoonful.

OF BLEEDING.

By the terms bleeding, bloodletting, phlebotomy, and venesection, is understood simply the opening of a vein.—There are, however, other modes of bleeding, such as ar-

teriotomy, or opening an artery, local, topical bloodletting is performed by scarification and cupping glasses, by leeches, &c. The application of cupping glasses is highly beneficial in some located pains, to remove the pressure of the atmosphere, and cause an increased discharge of fluids, which has been found effectual in relieving the patient. But as these applications will rarely be resorted to, I shall confine my remarks to venesection, which is the common and usual method of taking blood from the system, and on the propriety of which, different opinions, amongst the most scientific practitioners, have been entertained.

There was a period when bloodletting obtained great celebrity, as one of the most effectual means of removing disease, and prolonging life, which, by regularly opening the veins at certain seasons the superabundant & vitiated blood was removed, while the more salubrious and active qualities were supposed to be retained. But science and physiology have, however, detected the falsity of the doctrine, & discovered to every one of common capacity and inquiry that the vitiated or corrupted parts of the blood cannot be separated from the general mass, and preserve the purer particles. When the blood becomes vitiated, if it is too thick, or too acrid and serous, the whole mass consequently partakes of it, and is circulated indiscriminately, through every part of the system. By opening a vein, the contaminated portion can no more be separated from the healthy, than by tapping a cask of acid, vitiated wine, and drawing off a part, would remove the impurities, leaving the sweet and wholesome parts behind.

Every person that has paid the least attention to the animal system, readily discovers that the blood derives its origin and support, from the assimilation of nutrition. This fluid contains in itself, all the proximate principles of the whole organized body and is conveyed to every part of the system, to supply the secretions, continue the growth, and supply the waste of decomposition. It appears to be a general law of nature, in animal bodies to assimilate to themselves, a portion of nutrition suited to its growth and wastes, which fact is demonstrated in a variety of instances, particularly amongst children and the laborious, whose systems assimilate a much larger quantity of nutrition, in proportion to their size, than the aged and the sedentary; and further,

when the wastes of the system are less than the assimilation, the weight of the body increases, and the reverse is the fact when the wastes exceed the assimilation. It is evident from this view of the subject, that the system, under a healthy standard, does not assimilate to itself, more materials (the constituent principles of blood,) than is required to carry on the machine, with vigour and regularity. If this course of reasoning is correct, it will require more philosophy, than falls to the lot of common observers to explain the propriety of bleeding under disease or a deranged state of the organs, when the assimilation of nutrition wholly subsides which renders the body languid and lessens the circulating mass so apparent in the diminution of weight, the body sustains under such circumstances. The inquiry would naturally arise, what course can be pursued, that would be paramount to the practice usually adopted, (*bleeding*) by the principal physicians of the country under a high arterial excitement, accompanied with a fullness and pressure. Previously to answering the question, it will be necessary to point out the state of the system, and the situation of the blood.

First: Disease is constituted in a derangement and torpidity of the organs of secretion and excretion, whose offices are, to remove from the blood particular fluids—some of which are suited to the renewal of its growth, and the supplying of its waste; while others are entirely excrementitious, and no longer subservient but highly noxious to the system.

The blood, in consequence of the sluggish and deranged state of the organs, is overcharged with the more gelatinous and excrementitious portion, which retards its circulation through the capillary system; which gives rise to the pressure and irritation on the arterial system.

In order to remedy this derangement of the system, the capillary vessels must be expanded by the application of the alkaline wash and the vapor bath; the secretory vessels excited, and the fluids liquified by the sudorifics; the nervous system strengthened by the application of the shower bath and the use of nervines; and the digestive organs restored by the administration of tonicks; and the natural peristaltick motion of the bowels excited by the use of catharticks.

In addition to the remarks already suggested, I shall make a short extract from the Domestic Encyclopedia, which is entitled to the highest credit, considering the source from which it emanated.

"The blood contains in itself, and affords to the vessels, nerves, muscles, membranes, tendons, ligaments, bones, in short, to the whole organized body, all the substance and properties which enter into the formation of each, and constitute them what they are. And as the blood serves to supply the waste, and to make up the losses which those parts occasionally sustain. It may be considered as the original source of our whole organization. Now it requires little reflection to perceive that, by wasting this vital fluid, the sources of animal support & regeneration, are in a great measure obstructed and diminished. Although it be true that the blood, lost by periodical bleedings, is soon reproduced by the activity of the vital powers, yet this restoration is not effected without considerable effort, and at the expense of the whole machine. As this exertion is therefore a great pressure upon the vital powers, it must of course be attended with a proportionate degree of their consumption. And experience has shown in numberless instances, that persons accustomed to frequent blood-letting, are not only rendered more delicate in their constitution, and more subject to disease, but also that they die in general at an earlier age than others."

OF SURGERY.

EVERY person of common sense may do much in all casualties arising from dislocations, fractured bones, ruptured blood-vessels, &c., where a delay would be attended with the most fatal consequences. Immediate assistance is frequently necessary to stay departing life, in partial dislocations of the neck and ruptured blood-vessels. It is not intimated that the few remarks that I shall make, will enable a person to perform a capital operation: yet, with a proper attention to the few hints suggested, a person possessing a mechanical head, common ingenuity, and just observations, would be rendered competent in ordinary cases of dislocations and fractures.

OF DISLOCATIONS.

WHEN a bone is removed from its place at a joint, so as to prevent its natural motion, it is said to be dislocated, or out of joint.

In common dislocations, if immediate assistance is rendered while the muscles possess their elasticity, and tend to a restoration of the parts, it may be set merely by extension, (*pulling.*) But it is generally preferable to relax the muscles, and it is indispensably necessary when the parts have become swollen. For this purpose, a weak solution of alkaline salts should be applied warm to the parts. All that is necessary after the dislocation is reduced, is to wash the parts with vinegar and water, spirits and water, salt and vinegar, and cold water, to contract the muscles, and strengthen the nerves. If inflammation accompanied with pain and gangrenous symptoms appear, the antiseptick wash or poultice should be applied, and repeated, as circumstances require.

DISLOCATIONS OF THE LOWER JAW,

MAY take place from blows, biting hard substances, gaping, &c. In this case the patient cannot shut his mouth, and his chin is thrown on one side. In adjusting dislocations

of this kind, the patient should be placed in a low position, with the head pressed against the breast of some person to keep it steady. The operator should wrap cloths around his thumbs to prevent them from slipping; then place them as far back in the patient's mouth as possible, and the fingers under the jaw; then press firmly backwards and downwards, which will bring the elapsd heads of the jaw into their sockets.

OF DISLOCATION OF THE NECK.

IN partial dislocations of the neck, if immediate assistance is rendered, the parts may be adjusted, and the life of the patient saved, when a little delay would prove fatal. Cases of this kind may be distinguished by the following symptoms: A face bloated, and generally turned on one side, a swollen neck, and a total inability of the patient to move.

To reduce dislocations of this kind, the patient should be laid on his back, when the operator places his knees against the patient's shoulders, at the same time takes hold of his head with both hands, then with a gentle and strong force pulls the head, (twisting at the same time, if the face is turned on one side,) until the joints are replaced, which will be known by the noise they make when slipping into their places, the patient's breathing, and the head continuing in its natural position. Dislocations of this kind are easily adjusted—and resolute women have happily performed it.

After the parts are adjusted, gentle exercise should be enjoined, and the external applications made as directed in other dislocations.

OF DISLOCATIONS OF THE SHOULDER.

FROM the structure of the human system this joint is more subject to injuries of this kind than any part of the body. This joint may be dislocated in any direction; but is generally dislocated downwards, which may be known by a cavity on the top of the shoulder, and a protuberance under the arm. To reduce dislocations of this kind, the patient should be placed in a low position: the operator placing a handkerchief under the patient's arm, and as near the body as possible, and then carrying the head over his

own neck; then, by having two assistants, one to hold the patient firm in his position, while the other extends the arm, keeping it about half bent, the operator gently lifts the bone to its socket.

Or, instead of a handkerchief, place a ball of yarn under the arm as high as practicable; then by gently extending the arm, and bearing down at the same time, the bone is carried to its place.

If the dislocation is upwards, it may be reduced by extension only.

DISLOCATION OF THE RIBS.

OCCURRENCES of this kind seldom happen, by reason of their being firmly attached to the back bone. But when they do occur, if they are dislocated upwards or downwards, which is sometimes the case, in order to replace them, the patient's arm of the injured side should be suspended over his head, which draws the ribs asunder; in this situation they may be crowded into their sockets. A general action should be maintained in the system, and similar applications made to the parts, to those directed in other dislocations.

If they are dislocated inwards, very little more can be done than to bathe the surface with applications recommended in other dislocations, and to promote a general action in the system, accompanied with full meals of light and nourishing diet.

DISLOCATION OF THE ELBOW.

A DISLOCATION of the elbow may take place in any direction, & is known by a protuberance on the side to which it is pushed, and the inability of the patient to move the joint.

TREATMENT. When the parts are swollen, before an attempt is made to set the joint, they should be fomented with a weak solution of alkaline salts, to remove the swelling and relax the muscles. The operator is then to guide the bone to its cavity, with the aid of two assistants, one to confine the body, and the other to extend the arm; which should be kept in a position that the fewest number of

muscles are on the stretch, which is when the arm is about half bent. After the parts are adjusted, a little rest will be necessary, for the parts to regain their tone, with an occasional application of the mineral solution, vinegar and water, &c., as in other cases of dislocations.

Dislocations of the knee, wrist, fingers, &c., are reduced simply by extension; and sometimes it may require the assistance of one person to guide the bone to its place, which, when effected, may be known by comparing it with an uninjured part.

DISLOCATION OF THE HIP.

THE hip may be dislocated four different ways. But as they will require very little variation in treatment, I shall only describe the process to be observed when the dislocation is inward, which may be known by the leg being a little longer, and the knee's being separated.

The patient should be laid on the uninjured side: the operator, by placing one hand under the thigh, as near to the body as may be, and the other on the outside of the knee, then by raising with the hand under the thigh, and bearing down with the other, the thigh bone is brought to its place, while two assistants are extending the limb, which should be kept in a position that the least number of muscles are exerted, which is when the thigh forms nearly a right angle with the body. This operation is easily performed when the muscles are properly relaxed, and in no case should an attempt be made without it; as great injury has been sustained by using too much force: frequently the force even of six men has proved ineffectual, when one would have been sufficient with proper treatment. After the parts are adjusted, similar treatment is required as directed in other dislocations.



OF BROKEN BONES.

VERY little can be said that would be serviceable to the reader on the process of setting bones, as it is entirely a me-

chanical operation, and can be acquired only by experience, by persons possessing judgment, a mechanical head, and just observations.

Before a broken bone can be safely adjusted, the swelling must be reduced by the process directed under the head of Dislocations. The parts are then to be brought gently to their proper places, and confined with a light pressure by some flexible substance, such as paste-board, leather, &c., which, by moistening, soon assume the shape of the parts to which they are applied. But whatever substance is used, it should be applied sufficiently loose to give free circulation to all the fluids, and render the parts comfortable. The best wash that can be applied at first, probably is the mineral solution, vinegar and water, spirits and water, or spring water: if swelling and inflammation attend, accompanied with pain and a gangrenous appearance, apply the antiseptic wash in addition to the mineral solution. A general action of the system should be preserved by a proper administration of tonicks, catharticks, &c., as directed in other cases; with a light and nutritious diet. In cases of a fracture of those limbs that support the body, the best position probably is on the side, with the limbs a little bent; which is the most natural position for repose, as the muscles are the least exerted in that situation. The long established practice of confining a person on his back for a great length of time, is productive of great inconvenience: it renders him uneasy, often changing his position for relief; which not only endangers a removal of the bones from their proper places, but debilitates the nervous system, and greatly tends to retard the progress of a restoration of the parts.

It is important to have the patient kept clean and comfortable by often changing his clothes and bedding, to prevent excoriations and a depression of his spirits, which would be unfavorable to a speedy cure. When the patient is changed, he should make no exertions himself, and all causes avoided calculated to agitate the body, such as coughing, sneezing, frights, &c.; as they would tend to an injury of the fractured parts. If no accident befalls the patient in ten or twelve days, he may begin to move himself a little; but it should

be quite moderate at first, carefully avoiding any exertion of the muscles of the affected limb.

In case of a ruptured blood-vessel, accompanied with copious bleeding, the patient should be placed in a horizontal position, and the limb raised above the body, (if the wound is near the extremity,) to prevent a flow of blood to the parts: or a handkerchief may be tied around the limb, above the orifice if an artery, or below if a vein; then by placing some proper substance, (a small ball of yarn for example,) under the handkerchief and over the bleeding vessel, and by twisting a stick in the handkerchief, it will stop the bleeding until the dressing can be completed. The stypticks should be applied together with the adhesive plaster, which will close the orifice, and shield the part measurably from the pressure of the atmosphere.

In cases of a fresh incision or cut, the parts should be immediately brought together as close as possible, and the adhesive plaster applied in strips, to confine the parts; and they will immediately adhere, if kept perfectly still, and the circulation will be again resumed, and no irritation or soreness experienced. This is called healing by the first intention. Glue may be substituted for the adhesive plaster; it should be applied on strips of cloth as directed for the plaster.

Contusions or bruises should be frequently bathed with the mineral solution, vinegar and water, spirits and water, salt and vinegar, &c. If high inflammation succeed, attended with pain, the antisepticks should be applied, with a free use of the sudorifics and tonicks, as directed in other cases, accompanied with a nourishing diet. Fomentations of a weak solution of alkaline salts are also very serviceable in the first stages.

Strains or sprains should be treated in a similar manner. They require rest, to enable the muscles to regain their tone and elasticity; as many serious consequences have arisen from neglected sprains, although at first apparently trivial. A light bandage ought to be applied, to shield the parts from too great pressure of the atmosphere, and sufficiently loose to render the parts comfortable.

In deep wounds, an attempt should be made to close the orifice, after removing all extraneous substances and coag-

alated blood with the finger; avoiding the application of all liquids, as they prevent the adhesion of the parts. Strips of adhesive plaster should be applied on each side, sufficient to confine the edges of the wound, and shield it from too great a pressure of the atmosphere. If pain and inflammation succeed, the dressing must be removed, and the emollient poultice applied.

OF DISEASES.

THEIR
CAUSES, SYMPTOMS, & TREATMENT;
ALPHABETICALLY ARRANGED.

OF ABORTION.

THOSE females most subject to this misfortune, are those of a delicate, irritable constitution, and of a hysterical and passionate habit, more particularly the voluptuous.

CAUSES. The most frequent causes of abortion are, fear, grief, excessive exercise of any kind, particularly sudden stooping, and lifting heavy burdens, convulsive fits, falls or blows on the abdomen, violent coughing or sneezing, luxurious or low diet, or whatever is calculated to debilitate the nervous system, may be considered inducing causes.

SYMPTOMS. Pain in the back, and more particularly in the lower part of the abdomen, accompanied with a slight shivering, nausea, depression, and softness of the breasts, pain in the thighs, sinking or bearing down of the lower part of the abdomen, attended with a discharge from the uterine organs.

PREVENTION. The most effectual method of preventing such accidents, consists in a regular course of life, precisely and during gestation, gentle exercise in the open

air, an occasional application of the shower bath, early rising, cheerfulness and equanimity of mind, an occasional use of charcoal catharticks and tonicks.

The most critical periods are about the third, fourth, or fifth months of pregnancy, although it frequently happens at other periods. If a woman is visited with shooting pains in the back, extending to the uterus, the astringent lavenents should be applied to the afflicted parts, and also taken into the stomach, together with the tonicks and nervines, accompanied with the vapour bath. The astringent lavenments, with the addition of two tea-spoonful of lettuce laudanum, should be applied to the bowels, and repeated as necessity requires.

OF ABSCESS, OR BILES.

THIS disease is a circumscribed tumour, generally attended with inflammation and pain; the consequence of acrimonious fluids in the blood.

CAUSES. They arise, either from an obstruction in the cellular membrane, or in the vessels of the skin, which prevents the expulsion of the excrementitious fluids, as they accumulate, causing irritation, an increased heat, and consequently decomposition of the parts, which is in proportion to its being more or less deep seated.

TREATMENT. The leaves or roots of scoke, applied to the parts, gives immediate relief; or apply a poultice of the roots of blue flag, cabbage leaves and poppy heads or flowers bruised. The patient should take freely of the antisorbutick preparations, particularly of burdock seeds and roots, with the addition of one third of a tea-spoonful of mandrake to each potion, to be taken once in two or three hours, until the bowels are gently evacuated.

This course of treatment will not only relieve in the most desperate cases, but obtend and neutralize the acrimonious fluids of the system, and prevent their accumulation.

OF ANIMATION SUSPENDED, AND RESUSCITATION.

As persons have been restored after having been a considerable length of time under water, our efforts should be continued for several hours, although no signs of life are visible. After the body is taken from the water, it should be divested of its clothes, and placed on a blanket, with a light covering, and the head and shoulders a little elevated. The lungs should be inflated by means of a bellows introduced into one nostril, (closing the other and the mouth) or by blowing into the mouth by a strong person, (where a bellows or proper instrument cannot be obtained) then press the air out again, after it has remained in the lungs, ten or fifteen seconds, and again expanded and pressed out as before, which alternate inspiration and expiration should be continued for five or six hours, if no signs of life previously appear. The temperature of the atmosphere in which the body is placed, should not exceed summer heat, or about 70 degrees of Fah. Thermometer. If the natural temperature of the atmosphere, be considerably diminished, it should be increased by degrees to about summer heat, by artificial means. Dr. Goodwin very justly observes, that the water produces all the changes which take place in the drowning, only indirectly, by excluding the atmospherical air from the lungs, as they admit a very inconsiderable quantity of fluid to pass into them, during immersion. Hence, therefore, the necessity of inflating the lungs, by artificial means, as one of the principal sources of restoring life. The oxygen from the air, coming in contact with the hydrogen and carbon of the blood in the lungs, new compounds are produced, in the formation of which, heat is disengaged, if the nervous system, or vital principle has not become entirely extinct. External heat applied to the body, is attended with the most fatal consequences, by hastening decomposition and waste on the surface, which can be supplied, only, through the medium of arterial circulation: and further, the tendency of this application, would also be, to increase the circulation of the veins, (being more superficially situated,) which would produce a surcharge of blood, on the heart, which is already gorged, and retard its motion. Few attendants only, should be admitted, that the patient

may be in possession of pure air. All irritating medicines, narcoticks, such as emeticks, tobacco, &c., together with bleeding, carefully avoided. At the commencement of the process, the body should be wiped dry, with flannel, and the body occasionally sprinkled with cold water, and again wiped dry, and frequently bathed in spirits or vinegar, and salt and water. During these applications, gentle friction should be applied to the surface, with the hand and lavements of spirits and water occasionally applied to the bowels, which should be continued until circulation and sensation is measurably established. At this period, brandy and water, or mild sudorifics, such as ginger, galengal &c., in small quantities, in warm water sweetened, administered; also, lavements, composed of the same materials in much larger quantities applied to the bowels, and friction increased as circulation and animation progresses. If extreme pain ensues, friction should be increased with some coarse, rough cloth, until the surface is considerably irritated, and the vapour bath applied during the process, which expand the capillary vessels, and give a general circulation to the extremities and relieve the pain. But it must be borne in mind, that this extreme friction, should not be employed until a natural respiration, accompanied with a considerable degree of animation is established, as it is a well known fact, that a reduced excitability is destroyed by powerful stimulus. Electricity is also attended with the most fatal consequences; the agitating shock which is produced on the system, extinguishes the latent spark of life, as has been proved by experiments made on drowned animals by Kite. To conclude, let no powerful stimuli, either from friction, electricity, external heat, emeticks, &c., or tobacco smoke, injection, or bleeding, be applied, however renowned the authority, from which the recommendation of such application comes.

Death, in cases of suspended animation, from lightning, strangulation, mephitic gases, &c., is also in consequence of a deprivation of oxygen, therefore, one principle of application will be adapted to all, with some trivial variations, owing to peculiar circumstances. The restoration of oxygen to the lungs, by means of artificial respiration, as before directed, should be immediately resorted to, and continued until animation is restored, together with the application of

cold water, spirits, &c., with a gentle friction of flannels moistened with spirits, or by brushes dipped in oil. The beneficial effects of sprinkling the body with cold water in dangerous faintings in the suspension of animation, from lightning, drunkenness, &c., has been duly appreciated.—Great caution is, however, necessary, in its application, especially in cases when the excitability is nearly exhausted, in which case, as we have already shown, the quantity must be quite small, and gently applied.

On the examination of the production of animal heat, we are led to the conclusion, that it does not depend, for its support, on extraneous heat, either externally or internally applied; but is engendered and maintained, within the body, upon chemical principles, through the medium of oxygen in the brainular system, by respiration and cutaneous absorption, and the assimilation of nutrition in the digestive organs. An evidence that heat externally applied is not the cause of animal life and motion, a reference may be had to animal bodies in the polar regions. In the most rigorous parts of the season, animal bodies preserve their uniform temperature, although every substance received into the system is far below the freezing point. The fishes may add another testimonial that heat is not conveyed to the system, but produced by chemical actions of the vital principle; though this proposition is not strictly revelant. In addition to these remarks may be noticed the effects that a contusion of the brain, the wounding of a spinal marrow, the inhaling of deleterious gases or of air deprived of oxygen, produces on the system; which is a suppression of animation, while the system is in possession of all its parts, consisting of blood, nerves, latent heat, &c. No other loss appears to have been sustained, but the chemical operation by which this latent heat is disengaged, by the action of oxygen on the brainular system, as heretofore explained. It appears evident that a greater elevation of temperature surrounding an inanimate body than summer heat, would be attended with the most fatal consequence. Notwithstanding the long established celebrity of warm application in the restoration of suspended animation, yet doubtless they owe their popularity to the delays necessarily attending the difficulty of procuring them; during which time animation probably would be considerably advanced by respiration, friction, &c.

Lastly, the effects of heat on persons long exposed to a cold, dense atmosphere, or to frozen limbs, are very injurious, as faintness and mortification are well known to be the consequence. From the same principle, heat applied to an inanimate body, whose temperature is greatly diminished, would be attended with the most unfavorable results.

I shall conclude by a few general remarks on all cases of suspended animation. The subject, after having been carefully taken out of the water, should be conveyed to some convenient spacious room, (if the weather is inclement) & laid on a mattress with the shoulders considerably raised, & the head inclining to the right side. The clothes are to be removed, without delay, in the gentlest manner possible, & the froth and mucus removed from the mouth, by means of a feather dipped in oil. The body should be wiped dry with a warm flannel, and covered with a blanket, and artificial breathing commenced, as before directed, with spirits occasionally applied to the surface, accompanied with gentle friction, sprinkling cold water over the body, and again wiping it dry; and the flesh brush dipped in oil, occasionally applied; lavements, composed of warm water and salt, administered.

As soon as symptoms of life appear, the greatest caution is necessary to cherish the spark by the most soothing and gentle means. All harsh means must now be abandoned, such as bathing, strong stimulants, &c. Moderate friction with soft flannels dipt in warm spirits and water, may be used: a little brandy diluted with water and sugar, may be taken into the stomach, or a little ginger or galengal in warm water. Warm bricks enclosed in cloths wet with vinegar, are to be applied to the feet, and fomentations of aromatic herbs, to the pit of the stomach. The patient may remain for a little time without any applications, if no pain is experienced. If spasms and extreme pain, attended with convulsions, accompany the subject, the vapor bath may be applied in the gentlest manner, with the anodyne lavements, continued and increased gradually, until the circulation is established through the extreme vessels and the equilibrium restored. Gentle exercise should be enjoined, with the use of tonicks, nervines, sudorifics, and the baths, as necessity requires.

OF APOPLEXY.

THIS disease is a sudden deprivation of sensation, and all voluntary motion. Those persons most subject to this fatal disease are, the plethoric and corpulent, those that lead a sedentary life, those that indulge themselves in luxury and intemperance, and those that have passed the meridian of life.

SYMPTOMS. Giddiness, sound sleep, attended with a sonorous breathing, difficulty of swallowing, and a florid, bloated face; and a distension of the blood-vessels of the neck, while the pulse of the wrists is weak and almost imperceptible.

TREATMENT. The body should be supported in an erect posture, and the head kept in its proper position, accompanied with friction and cold bathing to the surface, to excite action of the capillary vessels, and increase the circulation of the blood on the extremities, and thereby relieve the pressure in the head. The vapor bath should be applied without delay, attended with a free use of the sudorifics and stimulating lavements. Bleeding in the jugular veins and temporal arteries may be resorted to, to stay departing life, when the delays attending the usual remedies would prove fatal. The emetick solution in table-spoonful potions, should be added to each lavement. Errhines applied to excite sneezing, and promote a discharge of mucus from the nose, and every other means, should be taken, calculated to excite action, and remove the pressure in the head.

OF ASTHMA.

THIS is a spasmodic affection of the organs of respiration, and more particularly of the glottis, attended with a difficulty of breathing, and sometimes accompanied with a cough.

There are two species of this complaint, but require very little variation in treatment. When the disease is attended with a secretion and discharge of mucus, it is called *humid asthma*: if the disease is attended with a dry cough, unac-

accompanied with expectoration, it is termed *dry asthma*. Persons that have passed the meridian of life are the most subject to this disease, and the male more than the female sex.

CAUSES. Violent exercise, and sudden exposure to a cold or wet air, while the body is in a state of exhaustion; inhaling the fumes of minerals; scrofula; a retention of acrimonious fluids during certain diseases, such as the measles, small-pox, &c.; obesity, distension of the abdomen, and obstipation; in a word, any thing that debilitates the nervous system, and impedes the natural action of the respiratory organs.

TREATMENT As this disease generally makes its appearance in paroxysms, the first object is to allay the excitement. The emetick solution in tea-spoonful potions, with an equal quantity of the powders of skunk cabbage, repeated once in ten or fifteen minutes, generally gives relief. Cold water applied to the breast will often give immediate relief. Expectorants, composed of blood root, skunk cabbage, Indian turnip and butterfly root, in equal quantities, in potions of one or two tea-spoonfuls, is very serviceable. A tea-cup full of strong coffee, made from the best materials recently burnt and ground, drank without sugar or milk, often has the most happy effects in removing spasms. Lavements, composed of half a pint of strong coffee, and two tea-spoonfuls each of powdered angelica seed, emetick solution, and lettuce laudanum, repeated every twenty or thirty minutes, are usefully employed. Garlic taken raw, one or two cloves at a time, also rubbed on the spine as hot as the patient can bear, often proves a valuable auxiliary in removing paroxysms. Inhaling the vapor of tar in a state of liquefaction, (*melting*,) or smoking dried poppy heads, leaves or flowers, or the leaves of stramonium, frequently gives relief. Washing the body with a soke wash, prepared by adding one quart of the bruised root to a gallon of spring water, applied cold, is of service: if the case is urgent, the root may be infused in hot water for fifteen or twenty minutes, and applied when sufficiently cool.

The diet of asthmatical persons should be composed principally of vegetable substances: those however should be avoided that induce flatulency, such as cabbage, turnips,

milk, &c. When animal substances are used, they should rather be boiled than roasted, and those of young animals are to be preferred. Soups and broth should be much used; also light puddings, and ripe fruit variously prepared: cold water and coffee should be the principal beverage. Light meals should be particularly observed, especially at night; and costiveness should always be removed on its first indication.

Flannel should be worn next the skin, to preserve a suitable warmth, and promote a proper action in the perspiring vessels; also woollen stockings and thick shoes: this will be found of singular service to all asthmatic persons. Cataplasms of roasted scoke root should be applied to the feet.

Exercise on horseback is very important in the asthma, to increase the circulation, promote digestion, and cause the lungs to expand and dilate more frequently: this enables the ambient air to impart to the blood more oxygen, which, by coming in contact with the hydrogen & carbon, produces chemical changes, in which aqueous and deleterious vapors are dissipated; thereby relieving the pressure on the lungs.

OF ATROPHY.

This is a disease wherein the body, or some portion of it, does not receive a sufficient quantity of nutrition to supply its wastes, consequently gradually decays and wastes away.

CAUSES. When the emaciation of the body is general, it arises from debility of the nervous system, and torpor of the digestive organs; when confined to some particular part of the system, it is owing to a paralysis of the nerves.

TREATMENT. The baths are particularly serviceable, accompanied with the flesh brush. The emetic solution taken according to directions at the commencement of disease, and a proper use of the stimulating tonic, generally give relief. In local cases the parts should be frequently bathed with the nerve and other stimulating ointments: or apply a wash composed of equal quantities of powdered

mustard and lobelia seed, and twice the quantity of bruised horse-radish root, infused in good vinegar. This application generally gives relief in the most inveterate cases, when accompanied with the other remedies. The cathartick pills should be administered, as necessity requires, to give tone to the bowels.

BITE OF A MAD DOG, OR HYDROPHOBIA.

THIS contagious disease is communicated to the human species only by inoculation from the canine species of animals, and is called canine madness, or in medical terms, *Hydrophobia*, which literally signifies 'dread of water.'

This virulent and awful calamity frequently does not manifest itself for several months after the bite, although in some instances it has made its appearance in eight or ten days. The wound generally heals as readily as incisions of a similar magnitude; though sometimes every effort to close the wound proves unavailing, and it forms indurated edges, and discharges considerable matter. Other symptoms attending the approach of this disease, are peculiar twinging, darting pains from the affected parts towards the throat. The patient at length appears melancholy, seeks solitude, and sometimes suffers under a sense of nausea. The characteristic symptom is dread of water, which often attacks the patient, and is attended with suffocation in attempting to swallow liquid substances. This latter circumstance is peculiar to the human species, as animals laboring under the influence of this virus evince no such symptoms.

TREATMENT. The volatile alkali or alkaline salts should be immediately applied, after having the adjacent parts removed by cutting, where it is practicable. The hydrophobic powders taken freely, and a strong decoction applied to the affected parts, give immediate relief. A poultice of the lion's-foot snake-root bruised, should also be applied, and renewed several times a day. The blue scull-cap in a strong infusion, should be drank freely, and applied as a lavement. The baths should be frequently applied, more especially the cold. Cupping, if immediately applied, gen-

erally prevents any fatal consequences. The lion's-foot snake-root proves a sovereign remedy, when timely and thoroughly used. Under the paroxysms of this disease, which are owing to a spasmodic constriction of the glottis, every means should be taken to prevent suffocation, which doubtless is the cause of death under hydrophobic affections. For this purpose the anti-spasmodicks, such as blood-root, cowfoot, lobelia seed, skunk cabbage, Indian turnip, &c., must be freely taken in warm water. Showering often gives immediate relief.

BITES OF VENOMOUS REPTILES.

It has been proved by chemical analysis that the virus of these reptiles, as well as most animal poisons, are acid; hence the propriety of alkaline remedies.

TREATMENT. Apply volatile alkali to the parts, and take twenty or thirty drops internally; to be repeated every twenty minutes for two or three hours: or take alkaline salts, when the volatile alkali cannot be obtained. The *premanes serpentaria*, (*lion's-foot snake-root*) in powders, in potions in warm water, from half to a tea-spoonful, taken once in fifteen or twenty minutes; or the recent root in a strong decoction, taken freely; and the bruised root applied to the parts, give immediate relief. *Seneca snake-root* in powders, taken in warm water in tea-spoonful potions, or a decoction of the plant taken freely, & the same applied to the parts, is an excellent remedy. *Blood root*, *wandering milk-weed*, and *plantain*, are often successfully employed when taken freely and applied to the parts.—Removing the parts by cutting, when it is practicable, has been recommended. Cupping gives relief if seasonably applied: or sucking the parts immediately extracts the virus; and may be performed with perfect safety to the operator, provided he does not swallow during the process, and the skin of the mouth is unbroken.

BLOOD, VOLUNTARY DISCHARGES OF.

UNDER this head, will be included bleeding at the nose, lungs, stomach, bowels, in cases of piles, and excessive uterine discharges.

BLEEDING AT THE NOSE,

More frequently arises in men than women, especially during the adolescent stage, (*the period between childhood & puberty.*)

CAUSES. Exposure to the heat of the sun, or to hot rooms, excessive exercise, in warm weather, particularly running, contusions on the head, strains by lifting, wrestling, blowing the nose, &c.

TREATMENT. At its commencement, if the discharge is trivial, cold water applied to the back of the neck, temples, forehead, &c. generally gives immediate relief. All tight clothes, and ligatures, or any incumbrance to a free circulation of the blood, through the extreme vessels, immediately removed, and the patient placed in an erect posture, in a cool atmosphere, the powders of birth root snuffed up the nose, also gives immediate relief. Should these applications prove insufficient, put a handful of feathers on burning coals, and let the patient inhale the smoke through the nose. This generally gives immediate relief in the most desperate cases. The vapour bath has the most happy effects in expanding the capillary vessels, and equalizing the circulation, and thus prevent a pressure of blood to the head. During the application of the bath, mild sudorifics should be taken, and warm emollient lavements in large quantities freely used. Dossils of lint or the inside of sole leather, dipped in a solution of the styptick, put up the nose, often proves successful. The birth root and cranes' bill taken occasionally; in teaspoonful potions, prevents a return.

BLEEDING AT THE LUNGS,

May be distinguished by the florid red and frothy appearance the blood assumes, when discharged.

CAUSES. It may be produced by running, more especially in a cold atmosphere, blowing wind instruments, loud speaking, wrestling, &c.

TREATMENT. Fine salt in table spoonful potions taken in a drystate and often repeated, generally gives immediate relief. Water should not be drunk for some time afterwards, or its effects will be obviated. This administration must be viewed rather as a palliative, and must be followed by some more permanent remedies, such as birthroot & cranes' bill equal quantities in tea-spoonful potions, several times a day, with the addition of half a teaspoonful of the emetick solution, in each potion to produce nausea. The vapour bath and the lavements applied as directed, for bleeding at the nose. Mild laxatives, such as manna, charcoal, whole mustard seed, combined with marsh mallows, daily uses in table spoonful potions, to excite action of the bowels. A light and nourishing diet and a suspension of all mental and bodily exercise, strictly enjoined. When the discharge is profuse from the lungs, the patient should inhale the fumes of burning feather.

Tonicks should be freely used, with an occasional use of the sudorificks, to maintain a general action. Inhaling the fumes of tar, while in a state of liquefaction is calculated to heal the excoriated parts and give tone to the lungs.

BLEEDING FROM THE STOMACH,

Is readily distinguished by the dark colour of the blood and as it is attended with very little danger, few remarks only will be necessary.

TREATMENT. The astringents in cold water, generally give relief. Fine salt as directed for bleeding at the lungs, or the patient may chew witch-hazel leaves, yellow-oak bark &c. and by swallowing the extract, often gives relief. Mucillages should be much used to sheath and soothe the irritable parts. The astringent tonicks taken before meals, such as box wood, black haw, and golden seal, in equal parts and in half tea-spoonful potions, combined with mucillages. Warm drinks or food particularly avoided.

EXCESSIVE UTERINE DISCHARGES,

Are owing to a relaxation of the parts, which generally arises from debility of the nervous system; hot confined rooms, fear, grief, &c., may be considered exciting causes.

TREATMENT. Cold water applied to the bowels by wetting a cloth, and applying it several thicknesses, frequently gives immediate relief. During the application, the patient should drink freely, of a strong decoction of yarrow blossoms or ginger tea. Should this prove ineffectual, showering must be immediately resorted to, which will relieve the most dangerous cases of flooding. In cases where the patient is nearly exhausted, and a delay would be attended with hazard, throw cold water immediately on the body of the patient, and let no prejudice or counsel, however respectable, influence you to withhold this application, as no injury can result from the administration. The patient should be placed in a spacious room, with few attendants that she may be in possession of pure air; carefully avoiding too many bed clothes, or too warm a room, which would relax the nervous system, and endanger hemorrhage. The diet should be nourishing and easy of digestion, and the bodily health to be preserved as directed in other cases.

BLEEDING PILES.

PLACE the patient over the smoke of burning feathers; this gives immediate relief: the astringent lavements should be frequently applied. Turpentine pills, the size of common peas, two or three taken once or twice a day, gives great relief. The bowels should be kept active, by the use of the charcoal cathartick.

BREASTS, OR MAMMÆ, INFLAMMATION OF.

No part of the human body is so liable to injury, from exposure, or to cancerous affections as the breasts of females.

Sore breasts are very common attendants upon females that nurse, accompanied with the most excruciating pains, which are easily remedied in their forming stages, therefore require early attention.

SYMPTOMS indicating this complaint are a slight hardness of the breast, with a sensation of chillness, darting pains, attended with an increased heat.

TREATMENT. Scake leaves or roots, bruised and applied to the parts, gives immediate relief. Stremonium, or mullein leaves, in their natural state, often proves successful. Or, take the green part of the bark of white poplar, (*shaking asp*) scraped fine, and lard, equal parts, simmered over a moderate heat, until the bark is crisped: then strain the oil and close it from the air for use. This preparation applied to the parts, gives great relief, and will generally remove the swelling if applied before a separation takes place, and will relieve pain in any stage of the complaint.

BREATH, FETID.

ALTHOUGH this cannot be called a disease, strictly speaking, yet it is a misfortune attended with very disagreeable consequences, to which many persons are subject, tho' apparently in good health.

CAUSES. A fetid breath may arise from carious teeth, putrid scrofulous gums, ulcerations of the lungs, &c.

TREATMENT Rinse the mouth every morning, with equal quantities of vinegar and water, or spring water, also immediately after meals, to remove all fragments of food.— Wash the mouth and teeth, two or three times a week with the tooth powder diluted with weak vinegar, or vinegar and water. If the bowels are costive, take a table spoonful of equal quantities of whole mustard seed and powdered charcoal in molasses, to be repeated as necessity requires. During the administrations the person should abstain from animal food. This will remedy the most inveterate cases of fetid breath. A strong decoction of boxwood with the addition of charcoal make an excellent gargle for the mouth, also chamomile tea and salt and water.

BURNS AND SCALDS.

THE application of cold water is a very ancient remedy, and is generally attended with success, when the burn is slight, and the application immediate. Rattlesnake oil immediately applied, gives almost instant relief, and prevents blistering. Spirits of turpentine or alkohol applied on carded cotton, sufficient to shield the parts from the air, is a very efficacious; lime water linament generally gives relief and is particularly serviceable where the skin is removed. If considerable pain attends the parts, apply the anodyne poultice. The sudorificks should be freely used, accompanied with the vapour bath, to keep up a general action on the exhalants, when the burn is large and accompanied with inflammation. After the inflammation and pain is removed the restoring salve may be applied and continued until the parts are restored. During these administrations, the parts must be kept, as much as may be, from the air, which is calculated to constrict the extreme vessels, and produce fungus flesh, which prevents the parts from healing. The general health of the system conduces greatly to a speedy cure, therefore claims particular attention. If from exposure or any other cause, fungus flesh makes its appearance, the powders of bloodroot, sprinkled on the parts, generally removes it.

 OF CANCERS.

THIS often fatal disease, is generally located about the glandular parts of the system, such as the breast, armpits, throat, &c., frequently commencing in the form of a mole, rising gradually into an uneven, indolent tumor assuming a dark colour, attended with darting pains and twinges. If neglected, the tumor increases, accompanied with excruciating, and at length, discharges a thin excoriating matter which corrodes tender parts when suffered to come in contact. Pain becomes more severe, & constant fungous flesh makes its appearance, protruding considerably above the surface, with uneven edges, assuming the colour and appearance of a rose.

CAUSES. This distressing malady, generally owes its origin to a derangement of the glands of the affected parts, producing vitiated and crude secretions, which coagulate slowly, through which the circulation becomes sluggish in consequence of its density, the excrementitious fluids, therefore, are not removed, as they accumulate, which corrodes, and produces irritation and pain.

TREATMENT. This disease which has prostrated so many of the human family, in all ages, and has baffled the skill of the most scientific practitioners, has with some propriety been considered incurable. And it doubtless has its incurable stages, like all other diseases, therefore requires early attention. But I think, however, no good reason can be assigned, why this disease will not yield to proper administrations as readily as other diseases of equal malignancy. The great object is to dissolve the coagulated excrement, promote a general circulation, and produce a healthy action in all the glandular secretions and excretions, and obtund acrimony in the circulating fluids. For this purpose apply the cancer salves to the tumour, excite action of the glandular secretions by the use of the cathartick pills, neutralize the acrimonious fluids by the use of the antiscorbuticks, and strengthen the nervous system by the application of the baths. During the application of the plaster, if considerable pain is experienced, apply the anodyne poultice.

The cancer plaster should be continued together with the other applications, until the tumor is dissolved, and the parts assume a healthy appearance. Wash the parts in a strong castile soap suds, with the addition of a little pearl-ash, at each dressing. The parts should be confined from the air, as much as possible by the anodyne poultice.

CALVUS, OR BALD HEADS.

ALTHOUGH baldness cannot be called a disease, yet it is a defect that many persons wish to conceal, & have remedied.

CAUSES. Amongst the predisposing causes, may be enumerated intemperence, excessive indulgences, severe fits of sickness, attended with an increased heat and pain in the head, general debility of the parts in old age.

TREATMENT. Doubtless when baldness arises from old age, and general debility, and has been of considerable standing, it is perfectly irremediable. But when it is occasioned by disease, and of recent origin, the growth of the hair may be accelerated by the following preparations.

Take boxwood, bark of the root, the expressed juice, the expressed juice of the roots of burdock, honey, and proof spirits, equal quantities, to be mixed together, and bottled for use, and applied to the deficient parts, several times a day. At each application, rub the head with an onion until the parts assume a red appearance: also apply once a day a thick boxwood sirrup. The head, during the process should be shielded from the air, by a flannel cap, to keep the exhalants pliable, and promote perspiration.

CARDIALGIA, OR HEART-BURN.

THIS disease is situated in the stomach, notwithstanding its name, and is generally accompanied by acid eructations, and nausea, and sometimes attended with water-brash, (*a discharge of an acrid fluid from the stomach.*)

CAUSES. A sedentary life, an immoderate use of ardent spirits, eating unripe fruit, drinking stale acid liquors, acidity in the stomach, indigestion, &c.; or whatever is calculated to debilitate the nervous system, may be considered inducing causes.

TREATMENT. In cases of considerable standing, the emetick solution may be administered, to excite the action of the mucous membrane of the stomach, and produce vomiting. During the administration, the patient should take the alkaline draught, to neutralize the acidity of the stomach; the charcoal cathartick, on retiring, and the lime-water draught in new milk, in the morning, with the use of tonicks before meals. The baths have the most happy effects in restoring tone to the nervous system, and in removing inveterate cases. Or, take the following preparation: magnesia two ounces, ginger and refined sugar one ounce each, blood root three fourths of an ounce, and gum Arabic or peach or cherry-tree gum three ounces; to be well mixed, and brought to a state for pilling by moistening

it with water;—to be taken in pills of the size of con-
peas, from two to four, several times a day, according to the
circumstances of the case. This preparation is also very
efficacious in all dyspeptic cases, and in any other case
attended with acidity in the stomach.

OF CATARRH.

THIS disease is attended with an increased secretion of
a thin, acid mucus from the glands and membranes of the
nose, accompanied with a sense of fullness.

CAUSES. Sudden exposure to a damp, cold air, after
considerable fatigue, or when the system has been relaxed
by being confined in a warm room; and also going suddenly
into a warm room after being long exposed to a cold atmos-
phere. Hot suppers, &c., may be considered inducing
causes.

TREATMENT. The vapour bath, accompanied with the
shower bath, and the inhaling of the vapour produced by
pouring pure water on hot substances, have the most happy
effects in removing catarrhal affections. Diluents and anti-
scorbuticks are to be freely administered, to liquefy the
viscid acrimonious fluids, and promote their discharge thro'
their natural ducts. The sudorificks should be freely used,
together with the catharticks, to excite action of all the
glandular secretions and excretions, and restore an equi-
librium in the circulating fluids. Mild expectorants with
mucilages should be frequently given, and an infusion of
savin boughs made a constant drink. Marsh mallows is
probably one of the best mucilages, as it possesses some
expectorant qualities, and should be preferred and freely
used; and gentle tonicks, occasionally. The patient's diet
should be easy of digestion, and nutritious. Flannel may
be worn next the skin, to preserve a proper warmth, and
a natural tone of the exhalants. Riding on horseback, or
journeying through a high, healthy country, greatly facili-
tates a cure. The shielding plaster applied to the back
between the shoulders, six or eight inches square, or a

plaster of white pine turpentine or burgundy pitch, proves a salutary remedy. This application will be attended with an itching sensation, and frequently numerous small white blisters will arise. The vapour should be applied to the lungs after the patient retires to bed at night, to prevent exposure: inhaling the fumes of tar in a state of liquefaction is also very efficacious.

OF CARUNCLES.

THESE are painful tumors, that rarely come to a head and discharge like cancers or boils, but often assume a gangrenous appearance. They generally owe its origin to an intemperate use of ardent spirits, and luxurious living. The applications recommended for cancers will generally be found efficacious, if the patient strictly avoids every kind of intemperance.

OF CHILBLAINS AND FROST-BITES.

THESE tumors are affections of the heels or other parts of the feet, and sometimes of the hands, accompanied with swelling & an intolerable itching & pain, cracking of the skin, and frequently attended with small white blisters.

CAUSES. They proceed generally from exposure to frost or snow for a considerable length of time, and then suddenly exposing the parts to a warm atmosphere, which also has a great tendency to produce mortification.

Children are much more liable to this complaint than adults, and those more especially of a delicate constitution; which may generally be prevented by wearing woollen socks, and keeping the feet dry, and, when cool, warming them by exercise, rather than large fires.

TREATMENT. At the commencement of this complaint, immerse the parts a few minutes in cold water; then apply equal quantities of spirits of turpentine, sweet oil, and proof

spirits, several times a day, with the addition of the anodyne poultice. When the pain is severe, the lime water liniment often gives relief: in mild cases, equal quantities of alcohol and beef's gall, have the most happy effect. Oose oil is also an excellent remedy, and will often give relief in the most severe cases.

PARTS FROZEN. Apply snow or ice water to the parts, with gentle friction, until circulation and sensation is re-established. The same applications are then required, as directed for chilblains. The patient must particularly avoid going into a warm room until the parts are measurably restored, as pain and mortification would be the consequence.

For the better information of the reader on this subject, and the better mode of treatment in cases of suspended animation from frost, I shall avail myself of a few remarks extracted from the Domestic Encyclopedia, a work of the greatest merit, and in whose sentiments I fully coincide.

"*Frost*, is that state of the atmosphere, which causes water and other liquids to congeal, or freeze: or it is that state of the natural world in which the atmosphere so absorbs the caloric from bodies on the surface of the globe, as to leave them, more or less, without fluidity or expansion.

"It appears that water and other fluids are capable of containing caloric in two very different states. In the one, they seem to imbibe it in such a manner that it eludes all the methods by which it is customary to observe it, either by our sensation of feeling, or by the thermometer; in the other, it manifests itself obviously to the senses, either by the touch, the thermometer, or the emission of light.

"In the first of these states, the body is called *cold*: but here we are not to suppose a *total* absence of heat or caloric: for even those fluids that are coldest contain it in a very considerable proportion. Thus vapour, which is colder to the touch than the water from which it was raised, has in its composition an immense quantity of caloric, even more than sufficient to heat it red hot. The same may be said of common salt, and of snow or ice. If a quantity of each of these substances be separately reduced to the degree of 25 or 30 of Fahrenheit's thermometer, upon mixing them together, the heat which would have raised the thermometer

to that degree, now enters into their substance in such a manner that the mercury falls down to 0. Here an excessive degree of cold is produced; and yet the substances contain the very same quantity of heat that they did before the mixture; for they absorb it from all bodies around them; and if water in a small vessel be placed in them, they will so draw out its caloric as to reduce it to a mass of ice.

"It seems, therefore, that the senses, even when assisted by thermometers, can only judge of the *state* in which the caloric is with relation to surrounding bodies, without regard to its quantity. Thus, if the caloric flows from any part of our bodies into any substance actually in contact with it, the sensation of cold is excited, and we call that substance *cold*: but if it flows from any substance into our bodies, the sensation of heat is excited, and we call that substance *hot*; without regard to the absolute quantity in either case.

"In cold countries, the frost frequently proves fatal to mankind, not only producing mortification, but even death itself. The hands of those unfortunate persons, who die in consequence of intense cold, are first seized, till they lose the sense of feeling; next a drowsiness pervades the whole body, which, if indulged in, is attended with imperceptible dissolution.

"If animation is suspended from severe frost, the following will be the external symptoms: rigidity of the whole body; and inflexibility of the limbs, which continue in the same posture as the frozen person had adopted during the unfortunate accident; the teeth are closed; froth sometimes issues from the mouth; there is a total insensibility to all stimulants, and the extremities are partly mortified, and, in some instances, spontaneously separate.

"Notwithstanding these unfavorable appearances, every exertion ought to be instantly made to restore life, if possible, by strictly adhering to the following directions; because there is a greater probability of recovering such persons, than those deprived of life, in consequence of drowning or suspension by the cord.

"No external warmth of any kind must be applied to frozen persons, till the internal or vital heat be excited; when the former also should be carefully and very gradually adapted to the manifest degree of the latter. Hence the whole process should be performed either in the open air,

or in a cold room; the body cautiously carried in a posture somewhat erect, to the nearest dwelling; the head turned gently towards the right side; and the clothes carefully taken off, without injuring the skin, or bending the limbs. These precautions are necessary, as a rough treatment may easily occasion dislocations of the joints, or fractures of the bones. Next, the whole naked frame, excepting the face, should be covered with snow from twelve to eighteen inches in thickness; or, if this cannot be procured, cold water may be substituted, and cloths successively dipped in it may be spread over the whole body, especially the head and breast. After continuing these affusions, gentle frictions with flannel or soft brushes, likewise immersed into cold fluids, should be commenced; persevering in these attempts for an hour at least, when the body ought to be left undisturbed for some minutes. If no signs of life appear, clysters of cold water, with oil and vinegar, or six ounces of brandy, are to be given, and the former process again and again repeated; so that five or six hours sometimes elapse, before any symptoms of animation are perceptible."

OF CEPHALGIA, OR HEAD-ACHE.

THIS painful sensation arises from a variety of causes, such as indigestion, torpor of the bowels, obstructions of the mucous membrane of the nose, and of other secretions, acidity in the stomach, a full meal of indigestible food, or severe exercise immediately after eating; fasting sometimes produces the head-ache. When nausea accompanies, it is called sick head-ache.

TREATMENT. The cephalic snuff generally gives immediate relief when the complaint arises from a torpidity of the olfactory nerve. It should be applied several times in small quantities, to promote a copious discharge of mucus. Bathing the forehead and temples with the mineral solution, vinegar or cold water, often gives temporary relief. When the disease arises from a torpor of the parietes of the stomach, attended with acidity and indigestion, the emetick solution

in tea-spoonful potions, should be administered once in twenty or thirty minutes, in a cup of some pleasant tea, with a free use of chicken broth or gruel, until the stomach is thoroughly evacuated. The restoring bitters and antidyspeptic pills may be taken according to directions. The bowels should be kept active by the restoring lavement and the catharticks. The lime water draught in new milk, may be taken daily, to neutralize the acidity of the stomach. Mustard seed and charcoal, in table-spoonful potions, have the most happy effects in removing constipation and neutralizing acidity. The baths are indispensably necessary in removing the most obstinate cases.

The patient should take in the morning, a couple of eggs well beat, mixed with a gill of milk just drawn from the cow; and one table-spoonful each of refined sugar and brandy: the diet to be in every respect nourishing and easy of digestion. Exercise on horseback should be freely enjoyed.

OF CHLOROSIS, OR GREEN-SICKNESS.

THIS disease principally affects young females after the age of puberty. It is attended with a depraved appetite, the face assuming a sallow and discolored or greenish appearance; it is sometimes accompanied with a soft swelling of the body, particularly of the feet and legs, during night; great lassitude and heaviness; difficulty of breathing after exercise; head-ache, palpitation of the heart, and suppression of catamenia (*menses*.)

CAUSES. A sedentary life, exposure to damp places, wet feet, low indigestible diet, a costive habit, a depression of the passions, such as fear, grief, melancholy, &c.; or whatever is calculated to debilitate the nervous system, may be considered as inducing causes.

TREATMENT. At the commencement of this disease, the mild emmenagogues, such as the cuckold, in a strong decoction, may be drank freely for some length of time; & one fourth of a tea-spoonful of the powders of mandrake root is to be added to each potion, until the bowels are

gently evacuated; it should then be discontinued, but the cathartick continued, with the use of tonic nervines; and the use of the baths occasionally, will generally give relief. If the disease should not yield to these administrations, the emmenagogues must be resorted to, in addition to the other administrations; and whole mustard seed, in half table-spoonful potions, taken once a day in masses, until the bowels are gently moved. This course of treatment will relieve the most obstinate cases when of long standing, if accompanied with a generous diet, daily exercise on horseback, early rising, cheerful company, flannel worn next the skin, and a removal of all tight lacing. We have the authority of Dr. Willich, of the most inveterate cases of the chlorosis being relieved by inhaling depilogistigated air, (*oxygen gas*.)

OF CHIOKE DAMPS, OR CARBONIC ACID GAS.

A COLLECTION of this gas is sometimes found in wells, mines, old cellars or caverns, with or without nitrogen gas. It will neither support animation nor combustion. Hence, where a candle will not continue to burn, life cannot be sustained. As a test of the salubrity of the air in wells, caverns, &c., a lighted candle should be first let down before any person is permitted to descend. The gas may be pumped out; or by throwing a quantity of gunpowder into the well, and a shovel-full of burning coals upon it, the deleterious gas is generally removed in the explosion. Quick-lime thrown in with a suitable quantity of water, has sometimes been found sufficient.

A person who has been deprived of animation by inhaling this gas, must be immediately removed to a cool, pure atmosphere, the body sprinkled with cold water, and friction applied to its whole surface: inflating the lungs by means of a bellows, and then pressing gently on the abdomen and expelling the air; thus produces artificial breathing.

For further information on resuscitation, the reader is referred to the observations on suspended animation.

COLD WATER, FATAL EFFECTS OF.

THAT fatal consequences have arisen from an immoderate use of cold water when the system was in a state of exhaustion from excessive fatigue, or from a long exposure to a warm atmosphere, requires no proof. The deleterious effects of cold water on the system under the circumstances described, are in consequence of its exhausting the remaining excitability of the system by its stimulating qualities; as we have already shown under the head of *Suspended Animation*, to which the reader is referred, to save repetition.

More injury is sustained by an immoderate use of cold liquids when the system is much relaxed, than is generally imagined. Although the consequences are not always immediately fatal; cholera morbus, dysenteries, colicks, gouts, dyspepsia, &c., are the consequence, with a train of evils too numerous to be particularized. It is with pleasure that I can remark that the illustrious Rush, and other scientific philanthropists, have by their humane exertions nearly banished this baneful practice from the city of Philadelphia. I would admonish every person that values his health, to be aware of its deleterious consequences, which may be obviated by taking very small quantities at a time, and washing the face and breast to stimulate the nervous system; or by taking a few drops of the essence of peppermint in each draft. This last is a great preventative, and every traveller and laborer should keep it constantly with him in the warmer part of the season, as an indispensable article. The most important consideration in this complaint is its prevention, which may be remedied in some measure by a free use of vegetable, bland food, with a considerable proportion of liquids moderately seasoned, with the addition of a reasonable supply of ripe fruit, which will supercede the necessity of much drink.

The symptoms described by the amiable Rush are the following: "In a few minutes after the water is swallowed, he is affected by a dimness of sight; he staggers in attempting to walk, and unless supported falls to the ground; he breathes with difficulty, and a rattling noise is heard in his throat; his nostrils and cheeks expand and contract in every act of respiration; his face appears suffused with blood and

of a vivid color; his extremities become cold, and his pulse imperceptible; and unless relief be speedily obtained, the disease terminates in death in four or five minutes."

TREATMENT. The most diffusive stimulents should be immediately administered; such as the essence of pepper-mint, Virginia or Tennessee-root, gallic acid, ether, spirits of turpentine, oil of amber, cayenne pepper, ginger, &c. Bathing the breast with the same stimulents or spirits, or rubbing the breast with the hand or towels, or occasionally dashing a little cold water on the breast, may be resorted to; and lavements of ginger-tea, with the addition of twenty or thirty drops of the oil of pepper-mint. After the patient is measurably restored, the vapor-bath may be applied, to equalize the circulation.

We have the authority of the celebrated Rush, of the efficacy of liquid laudanum in doses from a teaspoonful to a small table-spoonful as the case is more or less violent. Although great deference is due to the opinion of a man who has so much enriched medical science, as this renowned author; yet, as the reasoning on which the administration is predicated is not given, we have a just right to doubt the propriety of the application. In the case before us, death ensues for the want of excitement of the nervous system, which produces a cessation of the chemical changes that constitute life. From this view of the subject, it follows, that to excite the action and restore the tone of the nervous system, would be a more philosophical administration than to apply stupefying sedatives, as opium is well known to belong to that class of medicines.

OF COLICK.

THIS disease is a constriction of the colon attended with the most excruciating pain, nausea, distension of the bowels, great thirst, sometimes accompanied with convulsions, and frequently terminates the life of the patient in two or three days.

CAUSES. This complaint generally arises from acidity in the intestinal canal, the origin of flatulency. It may also arise from acid, indigestible food, inhaling the vapour arising from the decomposition of lead, poisonous substances, taken into the stomach, immoderate use of ardent spirits, acid wine, or cider, hardened faces, &c.

TREATMENT. At the commencement of this complaint ginger tea, taken as warm as the patient can conveniently bear, with the addition of half a tea-spoonful of alkali, applying, at the same time, a hot brick, wrapped in a cloth, wet with vinegar, or water, to the bowels, generally gives immediate relief, particularly if the disease arises from flatulency or a constriction of the parts. In violent cases the colick powders must be immediately resorted to, together, with the most active cathartics, and large emollient lavements, often repeated, accompanied with the vapour bath. If constipation does not yield to those applications, inject into the bowels, one pint of a strong decoction of angelica, or burdock seed with the addition of one table-spoonful each of the emetick solution and lettuce laridum, and fifteen or twenty drops of the oil of peppermint, to be repeated every twenty minutes, until relief is obtained. Tobacco smoke injection is recommended on the authority of Dr. Jameson, which should be thrown up, by means of a large bladder, until it sickens, in cases of intro-susception (*one intestine slipping into another.*)

Persons subject to this complaint, should avoid exposure and occasionally take a table-spoonful of equal quantities of whole mustard seed and charcoal, and one fourth of a tea-spoonful of pearl ash to excite action of the bowels and neutralize the septic acid. The diet should be nourishing, and easy of digestion, avoiding all acids, and vegetable substances, that have a tendency to produce flatulency.

OF CONSUMPTION.

THIS is a very comprehensive term, including all the variety of diseases, in which the body, from a defect in nour-

ishment, is gradually reduced to a state of emaciation; but the general wasting of the body, arising from a decay, of the powers of nature, belongs more particularly to a trophy.—Our remarks will therefore be confined, to the pulmonary, or consumption of the lungs.

This fatal disease, which levels thousands, annually, in the United States, may arise from a great variety of causes, such as a sudden exposure to a cold, dense atmosphere, while the body is in a state of exhaustion, by fatigue, or when the system is much relaxed by a warm room, damp beds, a compression of the chest or abdomen, which prevents a full and easy expansion of the lungs, a suppression of the customary evacuations, grief, intense study, excessive indulgencies of the animal passions, an intemperate use of ardent spirits, mal-conformation of chest, &c. In short, whatever is calculated to debilitate the nervous system, may be regarded as inducing causes.

SYMPTOMS. The symptoms of the first stages of this disease, as described by the illustrious Rush, are as follow:

“The symptoms, which mark its first stages are seldom observed; or if observed, they are too often, with neglect, by patients and physicians. I shall briefly enumerate these symptoms. They are a light fever, increased by the least exercise; a burning and dryness in the palms of the hands; more especially towards evening; rheumy eyes upon waking from sleep; an increase of urine; a dryness of the skin, more especially of the feet, in the morning; an occasional flushing in one, and sometimes in both cheeks; hoarseness; a slight or acute pain in the breast; a fixed pain in one side, or shooting pain in both sides; headache; occasionally sick, and fainting fits; a deficiency of the appetite, and a general indisposition to exercise or motion of every kind.”

These are the most usual symptoms, that attend this disease, in its forming stages, and if due attendance be given, with proper medicines and regimen, this complaint is easily removed & equilibrium restored. All that is required, is to strengthen the nervous system by the application of the baths and nervous; the constriction removed, and the fluids liqui-

fied by the sudorificks; the secretory and excretory vessels, excited by the catharticks & the diffusible stimuli; & the digestive organs, restored by the tonicks. These administrations must be accompanied with a careful avoidance of all debilitating causes, such as intemperance, exposure to sudden transitions of weather, &c. A generous diet, cheerful company, flannel clothing, and exercise on horseback, particularly enjoined. When the disease is neglected, or in cases where injudicious administrations are made, and the disease progresses, there is an increase of all the particularized symptoms, attended with a cough, and a discharge of a thick whitish mucus substance, sometimes streaked with blood, excessive looseness of the bowels, slight chills succeeded by flashes of heat, and a glutinous sweat, smallness of the ends of the fingers, with a curving of the nails, respiration hurried and difficult, swelling of the feet and legs, the eyes sunk into their sockets, and assuming a glassy appearance, frequent vomitings, particularly after meals, cold extremities; and death, as a welcome messenger finally arrives with a gentle passport to convoy the patient to another world.

TREATMENT. The baths are of the greatest importance and should be daily applied, with the alkaline wash. The scoke root wash should be also daily applied to the feet and legs, and occasionally to the whole surface, to excite action of the exhalants and remove the vitiated fluids from the blood, which have been retained in consequence of a torpidity of the secretory & excretory vessels. If a watery fluid accumulate under the cuticle in form of pimples or blisters, they should be opened with a needle, or the parts may be slightly scarified with a lancet. The emetick solution may be occasionally administered in tea-spoonful potions, to excite action of the pærietas of the stomach, and promote an increased secretion of the gastrick juice; and also applied to the bowels as a lavement, in a decoction of smart-weed and Indian turnip. The patient in the mean time should make a constant use of noble liverwort, smart-weed and Indian turnip, bruised and steeped in sweet milk. The cathartick pills may be administered as necessity requires, to give tone to the bowels, and their natural peristaltick motion aided by lavements. Mild tonicks, combined with mucilages, such as peach or black cherry-tree gum, to be

taken several times a day. The diet of consumptive patients, claims the utmost attention. It should be composed of the most nutritious substances, and so prepared as to be easy of digestion:—such as beef cordial, calves' feet, jelly, chicken, veal and mutton soups, with a due proportion of vegetables and seasoning. The patient may take every morning on a fasting stomach, a couple of eggs beat with a gill of warm milk, immediately after being drawn from the cow; and one table-spoonful each of loaf sugar and spirits. Corn-meal pudding and rice constitute an excellent repast, particularly for supper. Malt soup, prepared in the following manner, may be used:—Let two quarts of barley malt in one gallon of water in a vessel, inclosed from the air with a paste, be simmered in an oven of a moderate heat, until one half is evaporated; then strain and press out the liquor, and season it to suit the fancy of the patient. This and the beef cordial are the most nutritious, at the same time the most digestible of any substances with which we are acquainted, and may be taken freely, and also applied as a lavement. Regularity in sleep is very important; which should be enjoyed in spacious rooms, the temperature kept as equal as possible, accompanied with early rising. Feather beds, particularly in the warmer part of the season, are debilitating, and ought to be substituted by those composed of the blossoms of life-everlasting, husks, chaff, &c. It is very important in this disease, to render the body comfortably with suitable clothing, and every impediment to a free and full expansion of the lungs removed. Exercise adapted to the strength of the patient should be freely enjoyed, to increase the expansion of the lungs and the circulation of the blood; which enables the salubrious air to impart more oxygen to the system, and thus to increase those chemical operations that are constantly taking place in the system, which constitute animation.

The numerous volumes written upon this alarming disease by some of the ablest pens that have graced medical science, and the ample field it has afforded for medical speculation and discussion for centuries, are sufficient to preclude me from further remarks.

OF CORNS.

CORNS are hard excrescences produced by pressure and irritation on the parts, generally occasioned by tight shoes, which obstructs the circulation of the fluids through the cuticle, causing the lymph to coagulate, and forming a union of the skins, which gradually extends to the muscular flesh and occasions extreme pain.

TREATMENT. The callous, indurated parts should be pared down as thin as possible; then apply equal parts of crow-foot and blood-root, bruised, and renew it several times; at each renewal bathe the parts for some time in a warm solution of alkali: or, apply the shielding plaster after the parts are pared down and softened with the alkali: or apply a salve of equal parts of garlic juice and castile soap: or apply the cancer plaster. These are all efficacious remedies, and generally give relief. Loose shoes made of soft leather must be worn during the applications. A more lengthy process is, to apply the adhesive plaster on thin leather around the corn, leaving a hole in the centre, to prevent pressure on the affected parts; occasionally moistening the corn with a solution of alkali. This course will generally effect a cure in five or six weeks.

 CORPULENCY, OR OBESITY.

OBESITY is a great accumulation of fat or animal oil, which distends the adipose membrane. It is attended with considerable inconvenience, although the person is apparently healthy.

CAUSES. Indolence, excessive use of fat animal substances, indulgence in the use of wines, fermented liquors, ardent spirits, sleep, &c.

TREATMENT. Take of castile soap three ounces, vinegar and water half a gill each, mixed, and taken daily: frequent exercise, vegetable diet, water or vinegar and water the only beverage.

CONSTIPATION, OR COSTIVENESS.

THIS is an unusual retention and hardness of the excrement, attended with a dryness and difficulty of evacuation.

CAUSES. A sedentary life, a frequent use of drastic, poisonous drugs, acidity in the stomach and bowels, copious sweating, dry food, lean animal substances, debility of the intestines, lastly, a neglect of the usual and regular periods of going to stool, which checks the natural secretions of the mucous membrane of the intestinal canal.

TREATMENT. Take equal quantities of charcoal and whole mustard seed, in table-spoonful potions, in molasses, or mucilage, two or three times a day, with an occasional use of the laxative lavements. The visiting of the customary retreats regularly once a day at certain hours, and endeavoring to promote a natural evacuation by gentle efforts, by perseverance forms a habit of regularity, although they should not at first succeed. Constant exercise in the open air, and avoiding spirituous and fermented liquors. The diet should consist of the fatter parts of animal substances; bread composed of corn meal, or rye with only the coarser parts of the bran removed. It should be at least twenty-four hours old, with a due proportion of sauce beans, are preferable. A draught of cold water, with two table-spoonfuls of sale molasses, taken early in the morning, is very serviceable for costive habits. Mucilages often used such as slippery elm, marsh mallows, &c., together with the restoring bitters. In obstinate cases the cathartick extracts should be resorted to, and continued with the addition of the laxative lavements until relief is obtained.

OF COUGHS.

THIS is an involuntary convulsive motion of the abdominal muscles and diaphragm, suddenly expelling the air from the lungs with sonorous sound.

CAUSES. Acrid substance, either mechanically or chemically applied to the glottis, which is lined with a membrane

of the nicest sensibility, so much so, that it cannot bear the mildest stimulus, even a drop of cold water, without producing convulsions of the respiratory organs; which discharge the air with a sufficient force to remove all extraneous substances—a wise provision of nature to prevent suffocation. It may also arise from an increased excitement of the nervous system, or from an increased secretion of the mucous membrane that lines the back part of the mouth, and of the salivary glands, attended with a defluxion of those fluids, owing to debility of the nervous system, and torpidity of the exhalants.

[Dr. Franklin used to say, that he could eat himself into a cold or cough in three days. Nothing more is necessary than high living, hot suppers, warm clothing. This is true.]

TREATMENT. The principal object in this affection, is to strengthen the nervous system, and equalize the circulation, and excite action of the exhalants, and thus prevent an increased discharge from the glands of the throat. For this purpose the baths, accompanied with the anti-cough powders, generally give relief. If the cough is of recent origin, the expectorants are efficaciously employed; and the patient should take on retiring a strong decoction of the seeds of the Spanish needle, sage, hyssop, or the sudorifics; and apply to the feet some hot substance, such as smoothing *something*, &c., wrapped in a cloth wet with vinegar or water. This will relieve all ordinary cases.—When the cough has been of considerable standing, and arising from scrofula, catarrhal affections, &c., the emetick solution may be taken in tea-spoonful potions once an hour, to excite action of the glandular secretions. The patient should also take freely of the anti-scorbutick powders, use a nourishing diet, wear flannel next the skin, avoid exposures of every kind, particularly to damp places, and keep the feet dry and warm, and the body comfortable. Mild tonicks may be taken several times a day, with an occasional use of the catharticks, as circumstances require.

Coughs, although trivial in their commencement, may be considered the origin of pulmonary consumptions, and claim early attention, as they are easily remedied at their commencement.

COUGH, HOOPING.

THIS is a contagious complaint, and rarely afflicts a person more than once in life. It makes its appearance in the form of what is called colds, or an increased secretion of thick, mucous substance from the membrane that lines the back part of the mouth, attended with a difficulty of breathing, and sometimes with dangerous suffocation.

TREATMENT. The expectorants and anti-cough powders are very serviceable in exciting action of the glands, and liquefying the secretions. Rubbing the spine with garlic, as hot as the patient can bear, greatly relieves severe paroxysms. Anointing the bottoms of the feet with lard, and heating them for some time before the fire on retiring, is also a very efficacious remedy. The emetick solution in half tea-spoonful potion, with the addition of one sixth of a tea-spoonful of powdered blood root, often gives relief. The juice of roasted onions in tea-spoonful doses, with two or three drops each of rattlesnake's oil and spirits turpentine, is an excellent remedy. Emeticks may occasionally be given in any stage of the disease, with happy effects. A plaster of turpentine or balsam of fir applied between the shoulders, is very useful in violent cases. The emollient lavements often administered to keep the bowels active, and the cathartick extracts, as necessity requires. The diet light and nourishing; as broths, puddings, &c., with toast and water; hyssop tea and cold water for the principal drink. Exposure of every kind should be carefully avoided; and in the winter season the temperature of the air should be kept as uniform as possible, but not too warm. Mild tonicks with mucilages taken in small quantities several times a day.

CROUP, OR HIVES.

THIS is a disease to which children are liable, and those under the seventh year more particularly. It consists in an inflammation of the mucous membrane that lines the glottis, producing a viscid, gelatinous secretion, obstructing

respiration, accompanied with a wheezing and a sonorous cough, and sometimes with suffocation.

TREATMENT. This disease is completely under the control of medicine in any stage. In the most violent attacks, powdered blood-root in half or tea-spoonful potions in water, or a tea-spoonful of the emetick solution, and repeated once in ten or fifteen minutes until relief is obtained. Seneka snake-root is a very efficacious remedy; cow-foot in one-fourth tea-spoonful potions, generally gives relief. The juice of roasted onions in half table-spoonful potions, with the addition of three or four drops each of the spirits of turpentine and rattlesnake's oil, is a most certain remedy: it should be repeated as necessity requires.

OF VACCINA, OR COWPOX.

WITH a view to impress more fully on the mind of the readers the importance of availing themselves of the advantages of this "heavenly *Ægis*," I shall make an extract from the Domestic Encyclopedia.

"*Cow-pock*, Vaccine, is an eruptive disease, which attacks the udders of cows, and which, when transferred to the human system, effectually secures it from the Small Pox.

This disease, which may be justly considered as one of the greatest temporal blessings conferred by Providence upon mankind, was known sixty years ago in Germany, and also the fact of its being a preventive of the small pox. The same fact was likewise known in the dairy counties of England for nearly the same period, but in both countries the evident application of the important principle connected with it, was unattended to, until Dr. *Edward Jenner* brought it fairly before the public about twenty years since in England. The disease is now found in New-England among the cows. The power of the disease to prevent the small pox, is at length proved beyond all doubt by many million experiments in Europe and the United States.

The distance, as communicated by inoculation, in its commencement much resembles the small pox. Towards the close of the second day, when the operation takes effect (that is 36 to 48 hours, from the period of inserting the virus) a light speck of inflammation is perceived. On the fourth day a minute pimple may be felt rising above the skin, surrounded by a circular inflammation at its base. It now gradually increases in size, and by the close of the fifth day begins to assume (especially if viewed with a magnifying glass) that appearance which so much distinguishes it from the small pox. This consists in the perfect regularity, and beautifully circumscribed form of the pock, which has a surface flattened, with a depressed centre, of a darker colour, so as to give an appearance of elevated edges. In the small pox, on the contrary, by the sixth day, the inoculated part begins to assume an irregular, or angulated appearance, & its surface is not so flattened in proportion to its diameter.— This circumscribed appearance is retained by the cowpock, (vaccine) during its whole progress, even during the process of scabbing, while the small pox becomes daily more irregular, in consequence of the confluence of the adjoining pustules. About the fifth day the pock begins to change from the red pimple to a vesicle containing a fluid which through the cuticle much resembles the colour of whey.— This fluid is at its first formation, in its most active state, & probably will be less liable to fail, if taken at this early period, than if delayed to a later day. From the sixth to the tenth is mentioned as the proper period for collecting it.— About the eighth or ninth day, the pock having arrived to maturity, the constitutional symptoms begin to shew themselves: the general indisposition being preceded by swelling and pain of the pustule shooting up towards the socket of the arm. Langour, drowsiness, paleness, chillness and flushes of heat, headache, pain and fulness of the eyes, loss of appetite, and frequency of pulse follow. The marginal inflammation continues to extend one or two inches in diameter, forming a beautiful efflorescence, or areola, which has been regarded as a proof that a general affection of the system had taken place. This aerola, however, does not always exist, and the preventive property of the disease is perfect.

The febrile symptoms vary considerably: and sometimes ugly sores are induced by rubbing off the scab in its forming state, or by the friction of clothes. Care must therefore be taken to avoid these causes. For the above observations, we are chiefly indebted to the late excellent publication on the vaccine disease by Dr. Cox, which should be in the hands of every practitioner, and master of a family remote from medical aid.

The following concise directions for vaccinating may be found useful:

1. The vaccine pock matter being generally, when first taken from the vesicle, a thin limpid fluid, it becomes, when dried, scarcely visible, either in glass, or on the end of a lancet, even on a quite new one. If the matter be taken on thread, it will be perceived by the stiffness of it when dried.

2. If the matter is not used immediately on its being taken from the vaccine pock, it will of course be dry; & when employed, it should be softened by the smallest particle of hot water; and to avoid too great dilution, it should be done by a particle of hot water, hanging on the extremity of a needle.

3. The inoculation must be performed in the same manner as for the small pox; but it may be useful to recommend, that,

4. Matter may be inserted in one place only in each arm by a very small scratch or puncture of the skin.

5. One armed lancet should be used for only one or at most two punctures.

6. If the infection take, there will be seen in the inoculated part, in four days or less, a red spot, like a small gnat bite. In six days, there will be generally a very small vesicle. In nine days a circular vesicle appears, as a pea, often surrounded by a red areola. In twelve days the red areola will generally surround the vesicle, which then begins to dry, and turn black in the middle.

Between the eighth and eleventh day a slight fever often takes place.

By the fourteenth day, the vesicle usually changed into a circular dark brown scab, which should by no means be

removed, but left to fall off, which it will do in two or three weeks, leaving a pit.

If in four days the gnat-bite appearance be not manifest, the inoculation should be repeated.

7. For inoculation, matter may be taken between the sixth and tenth days, generally.

8. A considerable redness, like Erysipelas, sometimes comes on, and spreads over the arm, about the eleventh or twelfth day, which goes off of itself commonly in a day or two; but cooling applications will often be of service and never do harm. An emollient poultice should not be applied except in particular cases of phlegmonous inflammation.

9. The medical treatment is the same as that of the inoculated small pox.

10. As the vaccine inoculation, as well as the small pox inoculation, produces sometimes a local affection only, without any perceivable disorder of the constitution, it will be safest, in doubtful cases, to re-inoculate the subject; and if no local disease be produced, or only an imperfect vesicle of a few days duration, sufficient security will have been obtained by the first inoculation."

Under this head it is thought advisable to make a few remarks on the small pox, as all probably will not be wise enough to secure themselves from its ravages.

This disease is highly contagious and is one of the most alarming maladies to which the human family is subject, as no latitude or season exempts the being from its deleterious effects.

It attacks a person in a manner similar to inflammatory fevers measles, &c generally commencing with a chill succeeded by heat, nausea, and vomiting, pain in head, back, and limbs. About the fourth or fifth day, pimples make their appearance on the body, gradually increasing in number and size, and are filled with a limpid yellowish fluid.—It generally gets to its height about the tenth day and becomes more dense and disappears about the fifteenth.

TREATMENT. The principle requirement in this disease is to excite actions on the exhalants and cause an excretion of the acrimonious fluid as they are deposited by the arteries. For this purpose the mild sudorifick, such as

horse radish root, saffron, ginger, &c. should be freely used together with the antiscorbuticks, particularly the cuckold, and burdock, to obtund, neutralize and liquefy the fluids.—The cathartick pills taken in small quantities to stimulate the intestines and excite action of the glands. Stimulating lavements should be also occasionally applied. The diet nourishing and easy of digestion, avoiding hot rooms or exposure to a cold damp atmosphere. If from exposure or any other cause, the exhalants become torpid and the excretions diminish or what has been erroneously called striking in of the irruption, the emetick solution in table spoonful potions, may be administered to the stomach, and also applied as a lavement and repeated as necessity requires.

DANCE, ST. VITUS'S.

THIS convulsive and melancholy disease is said to derive its name from instances of some of the devotees of St. Vitus exercising themselves in dancing, until their intellects were disordered, and could be restored only by dancing again at the anniversary of St. Vitus.

The most marked symptom of this disease, is an involuntary motion of the arm or leg, and is generally confined to one side, but sometimes the whole body is affected.—This disease is more particularly confined to young persons, and females are most subject to it.

It may arise from a suppression of the customary evacuations, falls, or injuries of the nerves; or, whatever is calculated to derange and debilitate the nervous system, may be considered an inducing cause.

TREATMENT. The cathartick pills should be taken in small quantities for a considerable length of time, to excite a general action; & the patient's constant drink should be an infusion of sweet fern, with a daily use of the shower bath. During these administrations, the patient should make a free use of nervines, such as valerian, alspice, hops, asa-fœtida, &c., accompanied with the mild stimulants, gentle exercise on horseback, cheerful company, and a light, nour-

ishing diet. These administrations should be occasionally used for some time after the disease disappears to prevent a recurrence. Pills made of equal quantities of iron filings and asafœtida may be daily taken, two or three at a time.

OF DEAFNESS.

THIS complaint may arise from a variety of causes, such as ulcers, wounds, excessive noise, obstructions from exposure, hardened wax and dryness, or too great moisture, or from torpidity of the auditory nerve, &c.

TREATMENT. When the defect is owing to torpor of the nerves, in consequence of old age, or from ulcers in the ears, it is rarely remedied. But when it arises from catarrhal affections, the effect of long continued cold bathing or exposure to a damp cold atmosphere, the vapor bath should be administered, succeeded by the salt water bath; and the warmth of the ear preserved by applying to its cavity a little wool, moistened with a few drops of the ear ointment, or sweet oil. If the defect is owing to hardened wax and dryness, apply a little of the ear ointment according to directions, and syringe the ears with a strong castile soap suds, daily continuing the wool; or take one ounce of the oil of sweet almonds, half an ounce of camphorated spirits of wine, and two tea-spoonfuls of alkaline salts, mix them well together, and place a few drops into the ear every night on retiring to bed. A few drops of onion juice daily applied, with the addition of a little cotton wool moistened with the same, constantly worn in the ear, often proves a valuable remedy. When the ears are overcharged with moisture, they should be syringed with a strong decoction of cranes-bill, salt and water, to be applied cold: bathing in salt and water is very serviceable. Forcibly exhaling the air from the lungs, with the mouth and nose closed, has been judiciously recommended. Setons or issues made as near the ear as possible, have also been recommended, in cases of superfluous humors in the ears. Where the defect is owing to torpor of the nerves, apply a few drops of the tincture of lobelia seed and capsicum, finely powdered, half an ounce each, and gum

myrrh one fourth of an ounce; to be infused in half a pint alcohol: to be applied several times a day. This often gives relief in cases of long standing. It may also, in any case of defective hearing, be applied occasionally during other administrations.

OF DEATH, OR SUSPENSION OF ANIMATION.

THE cessation of life is not introduced as a disease, or for the purpose of pointing out a remedy, but to enumerate some of its most certain symptoms, when taken collectively, in order to define what state of the animal system is conclusively indicative of death. The frequency of hasty and premature burials has given rise to these remarks, which, if duly attended to, will enable a person to absolutely decide when life is totally suspended. Cessation of the pulse and respiration (*breathing*.) A rigidity and inflexibility of the muscles, accompanied with a total loss of animal heat. Relaxation of the lower jaw, dimness and a receding of the cornea. Dark spots on various parts of the body, attended with a cadaverous scent. Insensibility to all external applications; putrefaction. These symptoms separately considered, are not to be viewed conclusive; but when most of them concur in the same individual, they are a criterion the most conclusive of death.

Death is merely a want of the principle of animation—a passive extinction of animal heat; therefore wholly free from convulsions or pain. With regard to the supposed corporal sufferings and agonies so frequently spoken of, they are the convulsions and agonies of life, not of death. Pain arises from a constriction on the nerves, producing an obstruction in the flow of the nervous fluid that is constantly accumulating in the brainular system in proportion to its strength and energy, and the natural constitution. This obstruction causes a pressure on the parts, and gives rise to the sensation called pain. When the obstructions are of a sufficient extent or continuance, as measurably to stop the accumulation of this peculiar fluid, the body swoons, and is rendered insensible; and life gradually becomes extinct, unless the constriction is removed. A reference to cases of

palsies, drunkenness, &c. which is a suspension of this peculiar secretion, or in old persons that die natural death, (that is where the excitability of the system gradually becomes extinct,) or, in cases atrophy (a general wasting of the body,) convulsions and pains are unknown, may serve as a testimonial in support of the above remarks.

DROPSY.

This disease is distinguished by different names according to the location of the complaint, such as the following: When seated in the cellular membrane, it is called *Anasarca*—when confined to the abdomen, it is called *Ascites*—if located on the chest, it receives the name of *Hydrothorax*—and when it is seated in the brain, *Hydrocephalus*.

Causes.—This disease arises from a torpidity of the absorbents when confined to the cavity of the body, consequently the fluids secreted by the exhaling arteries to lubricate the parts, are retained, which distends the cavity of the body.

In cases of *Anasarca*, the cause may be attributed to torpor of the excretory vessels, arising from debility in the nervous system.

Treatment.—The principal object is to restore tone in the nervous system, and to excite an increased action to the secretory and excretory ducts. The scoke root and alkaline washes, and a proper administration of the *Arcanum*, accompanied with the baths, are admirably calculated for this purpose. The scoke wash should be daily applied more particularly to the feet and legs by rubbing with a flannel cloth wet with a strong decoction of the roots for fifteen minutes, then apply the wilted scoke, burdock or mullein leaves, and drafts or roasted scoke root to the feet. After the application of the wash, should pimples or blisters arise filled with a yellowish fluid, they must be scarified with a lance to permit the water to discharge. Diuretics should be freely used, together with the ashes of spanish segars in tea spoonful potions in honey several times a day, and the dropsical powders according to directions, more especially in dropsies of the abdomen: horse radish and spikenard roots applied to the feet in the form of draughts frequently has the most salutary effects.

DIABETES.

The peculiar characteristic of this disease, is an excessive discharge of a sweetish limpid urine: other symptoms attending this disease are a dry surface, great thirst, lassitude sometimes accompanied with swelling of the loins, costiveness, and although attended with a voracious appetite, the body gradually wastes away.

Causes.—This disease generally owes its origin to luxurious living, an intemperate use of ardent spirits, strong diuretic medicines, excessive indulgences in the animal passions, &c.

Persons most subject to this complaint, are those that have passed the meridian of life, and are of a feeble constitution, more especially the gluttonous and wine bibbers; and, whatever is calculated to debilitate the nervous system, excite an increased action of the urinary organs, may be considered inducing causes.

Treatment.—The great desideratum in this disease is to restore an equilibrium in the secretory and excretory vessels, thereby relieving the urinary organs, and to strengthen the nervous system.

The vapour bath should be frequently applied, followed with the cold bath, and a daily use of the alkaline wash.

If the disease is of considerable standing, the Arcanum should be resorted to, followed with a free use of the diabolic extracts: a gill of new milk in which has been dissolved half a tea-spoonfull of alum, may be taken three times a day; lime water in new milk in wine glass portions, ginger and allspice one tea-spoonful at a time several times a day, are very efficacious remedies. A decoction of rose willow, the bark of the root used as a constant drink.—Flax-seed scorched like coffee, and used as a diet drink, often has the most happy effects. The diet should claim particular attention, which ought to consist principally of animal substances rendered easy of digestion by proper cookery and highly seasoned with salt and black pepper, and eaten with crackers; vegetables, and particularly all acids to be carefully avoided. The emetic extracts in obstinate cases have sometimes been used with the most marked advantages, and should be duly administered.—

Flannel should be worn next the skin, and the flesh brush daily applied to excite a proper action and preserve a suitable degree of warmth on the surface, so necessary in carrying on the all important process of insensible perspiration.

DRUNKENNESS.

It may be doubted by some whether inebriation can with propriety be called a disease, but I know no good reason why this affection of the system is not as much entitled to that appellation as palsies, apoplexies, convulsions, fits, &c. as it some times proves fatal.

This debasing disease is one of those misfortunes that the human family voluntarily bring upon themselves, and generally for the purpose of removing distress of mind or to satiate an uneasy sensation arising from a habitual use of ardent spirits, and has more or less prevailed in every age and country since the invention of the intoxicating draught. This powerful stimulus acting on the nervous system produces an increased secretion of its fluids, gives rise to the most exhilarating sensations, and convey to the mind a train of associated and pleasurable ideas which continue until the nerves become exhausted, and torpidity ensues as a natural consequence of an excessive use of diffusible laxative stimulants. The muscular power which derives its support entirely from the nerve, loses its action, and animation is suspended in proportion to the torpidity of the nervous system.

Treatment.—The first object is to rouse the torpid state of the nervous system and equalize its circulating fluids.—Throwing cold water on the body, and pouring it on the head has the most happy effects. The emetic extracts, or the powders of the seeds of lobelia, or the root of blood-root, in tea-spoon-ful potion, in a cup of ginger tea or warm water, generally gives immediate relief.

Persons addicted to this vice may remove there thirst for ardent spirits by putting into their favorite liquor tartar-emetic and assafoetida, and drinking a sufficient quantity to produce excessive vomiting.

DYSENTERY.

It is considered advisable under this head to notice all diseases accompanied with excessive alvine discharges, violent vomiting, &c. as they frequently attend each other and arise from similar causes.

Causes.—The incipient causes of this class of diseases are a vitiated atmosphere: drinking immoderate quantities of cold water when the body is in a state of exhaustion by fatigue or in a warm atmosphere or a sudden exposure to damp evening air, eating crude indigestible substances; unripe fruit or large quantities of plums, cherries &c. or the lean part of fresh meat in the hotter part of the season.

The immediate cause of this disease is the formation of septic acid in the alimentary canal arising from an improper combination of oxygen with nitrogen.

Previously to entering upon the treatment of this formidable disease I shall make a short extract from Dr. Vought's excellent treatise on bowel complaints whose sentiments are in unison with philosophy and shed much light on the subject.

“That which I conceive to be the true and sole cause of this diseased state of the large intestines, has for many years been discussed by the most eminent physicians of the present age. It has been demonstrated by the most convincing arguments, and illustrated in such a manner, and by such examples, as to remove all possibility of doubt from the mind of every man of common sense. It is the only true cause capable of exciting the dysentery. But it has been, and is, and will be overlooked and undervalued, through the ignorance or neglect of many who pretend to be followers and practitioners of the science of medicine in the United States. To shew the falsity of the arguments, and overthrow the elaborate doctrines of those who have pretended that the putridity of the bile was the cause of bilious complaints, (so termed,) such as intermitting and remitting fevers, dysenteries, diarrhæas, cholera-morbus, &c. much might be said. The valuable discovery of the cause of those diseases, can never assume a higher rank than it is justly entitled to. We say that nitrogen, so combined with oxygen, (the principle of acidity,) as to form an

acid in the alimentary canal, is the only true cause producing dysentery. Pringle declares, that an acid exists in the fæces, which he called the seculant acid.* He united nitrous acid with the fæces to allay the fætor, but, to his surprise, it greatly increased it. I have tried the experiment myself, and found it to have the same effect. This acid was called, by Pringle and others, the mineral acid; but it has since been found to be of animal and vegetable origin, produced by putrefaction. Let it be implanted in the minds, not only of medical men, but also of all parents and nurses, and that the increased fætor of the stools of patients, labouring under this disease, is a strong proof that nitrous acid is the cause of this disease. It is found that the food made use of by the human species, contains the basis of this acid, in a large proportion; and animal diet is much more used than vegetable, among that class of community which suffer most from this disease.

The fæces of a man fed upon coarse bread (says Homburg) have been found to contain a salt, that detonated like nitre, when exposed to the fire. That its nitrous character is by no means ambiguous, its delagrating on live coals soon convinced him of its being nitre; but its constantly taking fire in the retort as often as distilled, is a sure proof that it is a nitrous salt. This acid, then, is formed in the fæces of those who live on bread or corn, but in a far greater proportion in that of those who live principally upon lean or muscular animal matter. Animal substances (says Pringle) will putrefy much sooner in a confined place than in the open air: it is therefore reasonable that they should putrefy sooner in the human bowels than out of them. It is also evident how dysenteries can arise in that season when no cause without the body can be discovered, and when a few sporadic cases only are met with. It does not follow that all dysenteries arise from a cause produced internally, but, on the contrary, a much larger proportion arise from the gaseous oxyd, and volatile acid of nitrogen, taken in from without the body.† The atmos-

* See Pringle's Diseases of the Army, p. 385.

† I would refer the reader to the principles of the Hon. Dr. Mitchell, of New-York, on the subject of alkaline remedies in fevers, &c.

phere that is affected with pestilential fluids may affect all persons who are exposed to its operation, and who have a predisposition existing in the system to receive the disease. It enters into the pulmonic organs, and passing through the routine of circulation, leaves to the alimentary canal a portion of its deleterious quality. It is taken into the stomach during our meals, and is swallowed with the food.—It is absorbed by the food. Expose a man's dinner for several hours over a filthy pond of water, where dead frogs,

and the analogy between septic acid and other poisons, dated January, 1797: it will put him in possession of alkaline remedies, not merely pure or caustic alkalies, but all such compounds of other bodies, with alkaline bases, as are capable of being decomposed by septic or nitric acid, when they meet with it in the human body.—(Medical Repository, vol. i. no. 11, p. 265.)

Few physicians (says the Doctor) calculate how many alkaline remedies they order for their patients; and still less have any tolerable idea of their real manner of operating. According to my judgment, there can be little doubt of the productions of septic acid in the human mouth, from corrupting remnants of food—of its operation in encrusting and corroding the teeth, vitiating the taste, mingling with the saliva, nauseating the stomach, &c. In the healthy state, the putrefactive tendency is checked by the gastric fluid in the stomach; and as long as it prepares good concoctive juice in sufficient quantity, so long will the contents of it be prevented from undergoing that process, whereby nitric acid is formed. But when, from intemperate drinking, excessive exercise, exposure to cold, or too great heat, or from any other cause, the functions of the stomach are impeded, or entirely cease; then food will corrupt, for want of sufficient power to concoct it, and the production will be a nitric fluid. As long as a man can keep up his digestive organs and powers, so long he will be free from the internal causes of intestinal fevers and diseases. And these complaints would indeed happen still more frequently, and be still more deadly, were it not for the health preserving fluid secreted by the liver, and which is capable of neutralizing any small excess of acidity that may prevail in the bowels; which secretion is still, by some, treated as an excrement, and as the cause of febrile diseases, when, in fact, it is proved to be the very antidote of the evil it has been accused of producing. The yellowness of the skin, in cases of yellow fever, and other pestilential diseases, is better accounted for, from the influence of nitric acid causing such a colour, as it acts upon the skin, than from the presence of bile. And the considerable quantity of bile secreted in such cases, shows that it has prevented, in the intestines, the fatal consequences of much nitric acid produced there. Those who have examined the dissections of the bodies of those who died of yellow fever, are satisfied, that as far above and below the orifice of

toads, newts, &c. are undergoing decomposition by the process of putrefaction, and I have no doubt it would absorb a sufficient quantity of pestilential matter to give him the dysentery, or some other pestilential disease. It is owing to the same cause that fever is produced; and such is the connexion of fever with dysentery, that it seems a necessary symptom of this disease, except in sporadic cases, where there is no corrupted state of the atmosphere. So rapid is the absorption of this venom from the intestines,

the ductus communis choledochus as the bile extends, so far the duodenum, and contiguous parts, are free from inflammation. Nitric acid, either in or out of the system, is called the poisonous cause of disease. To explain the various methods by which this acid is communicated to the human body, I will mention the expression of Dr. Mitchell, which may, perhaps, be a new idea to some of my readers. No doubt but other poisons are acids. There are facts that evince the same thing. And it is told, (says the Dr.) on the authority of Mr. Hook, that the stings of bees, wasps, and hornets, likewise emit liquids of an acid nature, which those creatures discharge on being irritated; and it is related on the same evidence, that the thorns of the nettle plant have sacks, containing a poisonous fluid at their bases, and holes near their tips, through which it is emitted, very much after the same manner of the fangs of serpents, and the stings of insects. This poison will probably turn out to be an acid, and throw light upon other poisons, called vegetable.—wherein the formic acid and the poison of nettles peculiarly differ from each other, and form the acid of pestilence, I do not pretend to know. At the same time, I think it probable that to whatever cause their small degree of differences may be owing, they all have a nitric basis, and the great traits of their character are mostly one and the same.

The following case is a proof that the poison emitted by the bite of a serpent is an acid. It is communicated by Dr. Moodie, of Bath, and recorded in the Medical and Philosophical Register, or Philadelphia Medical Museum, vol. i. p. 105.—The doctor says he has used, with the greatest success, the aqua kalipuri (water of the carbonate of potas) in the case of a woman who had been bitten by a viper, and who was apparently in a dying condition. A tea-spoonful was at first administered in water, every three hours, and afterwards every six hours. She was relieved immediately after the first dose, and in four days was perfectly restored to health. The doctor further observes, that when persons are bitten by animals whose venom is highly deleterious, the progress of the disorder may be stopped, and the person saved, by the speedy administration of the carbonate of potas. Hence, also, if any of the strong mineral acids should fall on any part of the body, the immediate application

that it is taken into the circulation, and produces fever almost as soon as it effects the alimentary canal ; and fever does exist sometimes previous to the affection of the intestines, when the cause is taken to the blood by the pulmonic organs. Marsh miasmata and putrid fumes, are considered the cause of the many febrile diseases which infect the inhabitants of this globe. We cannot see that they differ in any respect from each other. Marsh miasmata, are the fumes arising from marshes by reason of the decomposition of vegetable and animal substances that are found in those marshes. Hence they are putrid, and are nothing different in quality from the nitric acid gas. Whether they arise from marshy grounds, from filthy tanks, or filthy cellars and houses, from vegetable or animal matter, they are, in substance, the same, and are capable of exciting malignant diseases ; and whether this terrible monster (Python) be generated in the body or out of the body, it is a certain fact, that it must, by some means, be communicated to the system to act as the cause of disease ; and it is also a certain fact, that it must exist in the large intestines to become the cause of dysentery, whatever may be the predisposing cause ; and acid in the large intestines, is and ever will be the only true cause of this disease."

Formidable indeed this disease may be considered and it may with equal propriety be said that history mourns less for those that are slain in battle than for those that have fallen victims to this calamity. Its malignancy has frequently baffled the skill of the most scientific in the profession which doubtless was rendered more fatal by their injudicious administrations arising from a want of knowledge of its immediate cause.

Symptoms.—This disease in its forming stages is accompanied with slight chills, succeeded by fever, great debility

of this substance will prevent them from any farther mischief. Or if a person should accidentally swallow any of the mineral acids, or muriate of mercury, or any other corroding salt, which an alkali will decompose, a speedy exhibition of a solution of these alkaline salts, in proper doses, will afford the most likely means of relief, and also means of preventing fatal effects. I am inclined to believe that the immediate application of the carbonate of potass to the bite of a mad dog, would prove the means of preventing the disease called hydrophobia.

nausea, and sometimes violent vomiting attended with distressing tenemus, and excessive alvine discharges of glutinous substances streaked with blood.

Treatment.—The first objects is to remove all obstructions in the alimentary canal neutralize septic acid and allay irritation. For this purpose, the Anti dysenteric extracts have the most salutary effects: it should also be applied to the bowels as an enemas in twice the quantities for the stomach in half a pint of a mucilage of slippery elm, with the addition of half a gill of charcoal. The alkaline wash followed with the vapour bath proves a great auxiliary.

In cases of violent vomiting great debility, and cold surface, attended with a viscid albuminous sweat, take strong vinegar saturated with table salt, one table spoon ful add half a gill of boiling water, when cool to be taken in table spoonful potions every ten minutes, until the vomiting ceases, and the surface becomes warm; similar preparations should be applied as an enema in much larger quantities in half a pint of a strong decoction of the root of blue cohosh. If excessive alvine discharges continue administer a strong decoction of low arkangel and rose willow in half gill potions every twenty or thirty minutes until the alvine excretions become natural. Where great pain and irritation is experienced in the bowels apply several thickness of flannel wrung out of hot vinegar, saturated with table salt to the bowels to be repeated every few minutes until relief is obtained. Mucilaginous drinks should be freely used in all stages of the disease.

It is very important to keep the temperature of the air in the room of dysenteric patients about summer heat as he is necessarily exposed to the air at different times.

Cleanliness should be particularly attended to; bed clothes which should be mostly linen often changed and cleansed with a weak solution of pearl ash and water. The patient's chamber should be well ventilated, and kept as clean as possible. The diet should consist of soups made of mutton or fowls. beef cordial, malt soup, panada, gruel &c. salted fat pork boiled, with a little pepper and vinegar, is often a grateful repast, calves feet jellies, with eggs, and pounded crackers, with the addition of a little nutmeg and seasoning, is a nourishing diet.

DYSPEPSIA OR INDIGESTION

Symptoms.—This disease is frequently attended with flatulency acid eructations, nausea, costiveness, pain in the pit of the stomach, and a sensation of fulness and depression after meals general, debility, and sometimes accompanied with a voracious appetite.

Causes.—This malady may arise from a variety of causes, such as the following: a sedantary life, grief, intense study, great anxiety, an immoderate use of ardent spirits, more particularly after meals, a frequent use of drastic cathartics, large quantities of hot tea or coffee, luxurious living, or any thing that debilitates the nervous system.

Treatment.—To affect a permanent cure, in dyspeptic cases, the patient should adopt an entire change of living from that which produced the disease. In chronic cases, a course of the Arcanum should be administered. The anti-dyspeptic pills taken according to direction. The charcoal cathartic in table-spoonful potions with the addition of one tea-spoonful of magnesia, three or four times a day, to be continued until the bowels are gently evacuated: then take the anti-dyspeptic pills according to directions until health is restored, occasionally using for a change, the following: take of the Golden Seal, the whole plant, three parts gentian and blood root, the roots one part, extract their virtues and evaporate to the consistency of molasses; then add the powders of blue cohosh with one fourth part of the powders of beef's gall to bring it to a proper state for pilling, to be taken one at a time a little before meals. The diet of dyspeptic patients claims particular attention, which should be nourishing and rendered easy of assimilation by cookery; exercise in the open air, particularly on horse-back, contributes greatly to the restoration of dyspeptic patients.

EAR ACHE.

The ear is a tender organ and is subject to injuries in a variety of ways: by exposure to a current of cold air, wet feet, &c. which produces a constriction on the membrane, that lines its internal cavity; and from insects getting into the internal canal.

Treatment.—If the affection is apprehended to arise from an insect, drop a little warm oil into the orifice, the person lying on the affected side ; this will generally cause the insect to decamp ; if the parts are considerably irritated after the removal of the insect, apply a few drops of the lime water linament warmed, at the same time a little cotton wool moistened with the same should be applied to the external cavity to prevent too great a pressure of the dense atmosphere. Where the complaint arises from exposure, foment the parts with a strong decoction of hops and apply a few drops of the oil of spikenard, or, if that cannot be readily obtained, take the expressed juice of the root, to be continued every evening until relief is produced ; apply cotton wool moistened with the same as before directed.

Should these applications prove ineffectual and extreme pain, accompanied with a throbbing sensation continue, apply the anodyne poultice as warm as can conveniently be bourn and often repeated until the abscess discharges. The parts should be syringed with a strong castile soap suds moderately warm, several times a day ; after each application, syringe with a strong infusion chamomile in which a little gum myrrh has been dissolved, the parts are to be shielded by the application of cotton wool moistened with the dentrifice ointment.

The oil of spikenard is a very efficacious remedy for defective hearing.

EPILEPSY.

Symptoms.—The first indications of the approach of this distressing malady is a roaring and confusion in the head, debility, diminution of heat on the extremities, the countenance assuming a darker aspect in consequence of a lack of oxygen ; these symptoms are succeeded by a tremulous agitation of the body a distorted countenance, a violent cry suspended respiration, a distention of the neck, an increased action in the temporal arteries while the pulsation at the wrists is almost imperceptable.

Causes.—This disease may arise from an irritation in the alimentary canal occasioned by the tape worm, or from debility in the nervous system, which deranges all the

chemical operations consisting of the absorption of oxygen, and the disengagement of carbonic acid; consequently the equilibrium of the circulating fluids are destroyed and the temperature of the extremities diminished.

Treatment.—The Arcanum should be administered according to directions. If there are strong indications that worms are the cause, let the patient take in the morning before meals two tea-spoonfuls of equal parts of pulverized alum, table salt, and the filings of iron in molasses, to be repeated four or five mornings in succession, then take the cathartic pills to produce a thorough evacuation of bowels. The patient should drink freely during the process and for a considerable length of time afterwards a strong decoction of the roots of blue cohosh and the herb of smart weed. In addition to the above, take of the the antispasmodic elixir in potions from twenty to thirty drops in the cohosh tea. Bathing the breast with alkohol at the approach of the fit generally prevents the paroxysm; dashing cold water on the body has the most happy effects. The patient should bathe the surface daily with alkohol in which has been dissolved two ounces each of gum myrrh and beef's gall in the proportion of four ounces to one quart. A clove of garlic taken every morning proves a good auxiliary.—Tonics composed of equal parts of hercules heal all gentian and unicorn four ounces of the powders, infused in one quart of spirits and taken in half wine glass potions three times a day, to perfect the cure.

ERYSIPLIAS,

or

ST. ANTHONY'S FIRE.

Symptoms.—This disease generally makes its appearance in small white pimples or bunches resembling the bites of insects, on the face neck or breast; some times it extends over the whole body, and is usually attended with headache, nausea and chills, succeeded by fever, redness of the skin, and an itching, burning sensation. About the third day, the pimples fill with a yellowish fluid, and disappears about the fifth.

Treatment.—The patient should drink freely of a strong

infusion of saffron flowers, at the same time give a syrup of the bark of white ash, in table spoonful potions several times a day, until the bowels are gently evacuated; during the administration bathe the affected parts with the same preparation.

The vapour bath may be applied in any stage of the complaint, accompanied with the alkaline wash. The sudorificks and the anti-corbuticks should be constantly employed to neutralize the acrimonious fluids, and stimulate the exhalants, and permit the excrementitious substances to be discharged from the system.

If the exhalants become torpid, and the surface assumes gangrenous appearance, bathe with camphorated spirits, with the addition of one ounce each of gum myrrh and beef's gall, to one pint of the spirits, taking freely of the sudorificks, with the addition of one table spoonful of the erutick extracts, to be repeated every fifteen minutes until relief is obtained.

DISEASES OF THE EYE.

The eyes are subject to diseases from a variety of causes; such as viewing luminous bodies, reading or sewing by candle or fire light, and frequently from a peculiar state of the atmosphere.

Treatment—In cases of inflammation, wash the eyes with a weak pearlash water, and apply cold milk and water constantly until the constriction is removed, and inflammation abated.

In chronic cases the following may be applied. Take one table spoonful each of white vitriol and table salt, burn them together on earthen or copper, stirring it until it becomes a grey powder, then add three gills of soft water in a proper vessel, strain through several thicknesses of fine cloth, then add two table spoonfuls of refined sugar, and a piece of blue vitriol the size of two indian corns. A few drops is to be put into the eyes several time a day, and the cathartic pills taken sufficient to act on the bowels, often facilitates the cure. The ophthalicks should be applied according to directions; every morning the patient should put his face into a vessel of water, and open and shut his eyes

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while he could hold his breath; the process to be several times repeated.

FAINTING AND SWOONING.

This is a sudden suspension of all the muscular powers, while the vital functions feebly perform their office.

Although this disease rarely proves fatal, yet it is very alarming to those that witness it; and the patient frequently suffers more from the harsh and improper treatment of the frightened attendants, than from the disease.

Causes.—This affection may arise from loss of blood, frights, breathing air of confined rooms when a large number of persons are assembled, owing to a lack of oxygen, external injuries, wounding of tendons, a sudden change of the body from a long exposure to a cold atmosphere to a warm room, and sometimes from a slight contusion on the ulnar nerve at the elbow.

Treatment.—The first object is to quietly remove the person to a cool pure atmosphere, and place him in a horizontal position, with head a little elevated; all tight clothes, and every impediment to a free circulation, and full expansion of the lungs removed without delay, and immediately sprinkle cold water on the face and breast, and salt water lavements applied to the bowels. If the patient does not recover under these administrations, spirits of heart's horn or lavender should be applied to the nose, and a few drops of the essence of peppermint in a table spoonful of spirits and water administered to the stomach; the surface of the body should be rubbed with flannel dipped in cold spirits or vinegar. It must always be borne in mind, that all powerful stimulants of every kind, violent agitation of the body, or raising it to a sitting position, should be carefully avoided. For a further knowledge of the better mode of treating diseases of this kind, the reader is referred to the remarks on resuscitation.

FEVER.

By this term is generally understood a deranged state of the system, accompanied with an increased heat on the surface, and a high arterial excitement.

Although the term fever has been confined to a few particular diseases, yet the number of febrile diseases has been gradually increasing, and Dr. Rush has added dysentery to the list. Dr. Jameson calls canine madness hydrophobick fever, and Dr. Willick says that measles is an eruption fever, and I think with strict propriety. Probably no good reason could be assigned why all other diseases attended with febrile symptoms should not assume the name of fever, as the principle in the production and distribution of heat is the same in all animal bodies, and under all the derangements to which the system is liable. Having previously given a short dissertation on animal heat, to which the reader is referred, it will only be necessary to point out the cause of the increased temperature of the surface and the high arterial action under febrile diseases.

The incipient cause of fever may be attributed to inhaling a vitiated atmosphere arising from the decomposition of animal and vegetable substances and stagnant waters.— This gas which is of greater specific gravity than atmospheric air being received into the system, deranges and lessens its chemical operations by its deleterious qualities, producing spasms, or a constriction on the extreme nerves, thereby preventing a proper excretion of the viscid and gelatinous portions of the blood & conversion of solids into fluids; also it prevents a regular and uniform dissipation of the accumulated heat, accounts for the increased heat of the surface, consequently the venous blood which is transmitted to the heart is lessened about two degrees in temperature by being circulated through the extreme vessels in a healthy subject now assumes an equal temperature with *arterial* blood: the heart thus stimulated by the increased temperature of the venous blood, aided by the more frequent respirations, and the excitement of the nervous system, all causes in connection accounts for the high arterial excitement.

Under this deranged state of the nervous system, all the secretory and excretory vessels are rendered torpid, therefore the excrementitious substances are not removed as they accumulate septic acid, (the basis of putrefaction) increases in proportion to the increased wastes of the system, and the diminution of bile and other alkaline secretion. This fact is clearly demonstrated not only in the in-

creased fetor of stools, but from the pulmonary and cutaneous transpirations.

Notwithstanding the broad view we have taken of the term fever, it is thought most proper to confine our remarks particularly to those infectious diseases that arise from a contaminated atmosphere, such as intermittents, bilious and yellow fever, which will give the reader a knowledge of the better mode of treating all other diseases which have been ranked under the head of fever.

FEVER INTERMITTENT.

This infectious disease is produced by inhaling the effluvia of low marshy situations and drinking impure water, which debilitates the nervous system, producing a constriction and derangement in its functions. The spinal marrow, in which the first sensation of chillness is felt, ceases to secrete and distribute an usual equal proportion of nervous fluid, owing to spasms or constriction in consequence of the more minute vessels being robbed of a due supply of this peculiar fluid (the principle of animation) render torpid a portion of the muscular system, while the other receives a full supply, and maintains its usual or increased action, gives rise the agitation of the muscular system which continues until the increased heat produced upon the principle already explained, relaxes the spasms, and the circulation becomes equal. Then the febrile part of the paroxysm commences, as it is termed, although the surface of the body is no warmer than it was during the agitation.— This part of the paroxysm continues until the extreme vessels become relaxed, which permits the viscid and excrementitious portions of the blood, and the accumulated heat to pass off as they accumulate. Then the sweating stage commences; that is, the perspirable matter becomes visible to the naked eye in consequence of the diminished temperature of the surface upon the principle heretofore explained. This stage continues until the nervous system measurably regains its tone and energy.

Treatment.—Administer the Arcanum according to direction: then take of the powders of peruvian bark, black pepper, ginger, alum, and the roots of blue cohosh, equal

quantities; one table spoonful, with the addition of one grain of the sulphate of Quinine in molasses every four hours, during the intervals of the paroxysms. The patient should use the shower bath every morning, and while in the febrile stage of the paroxysm, pour a bucket of water over the naked body; then apply several thicknesses of cloth wrung out of cold pearlash water to the breast and stomach, to be repeated every few minutes until the fever abates. Make a constant drink of the roots of blue cohosh. Egg shells dissolved in sharp vinegar, adding an equal quantity of horse-radish root, to be taken in half wine glass potions twice a day, often facilitates a cure.

Preventive.—Take from half to a tea spoonful of the powders of black pepper every morning before going abroad for a week, then omit it for several days, then resume it again; so continue through the sickly season.—Take occasionally one pill on retiring, of the extracts of the whole plant of golumseal to regulate the tone of the bowels. Take the tonick bitters once or twice a day.

FEVER YELLOW.

Cause.—This infectious disease arises from the effluvia of moist vegetable and the remains of animal substances, acted upon by 80 or 90 degree of heat for a long period of time. The air impregnated with this noxious vapour is heavier than pure air, as experiments have shown that miasma does not rise more than six or eight feet. Hence the importance of high, airy situations.

Symptoms.—Pain in the back part of the head, loins, distended eye-balls, fever, sickness and burning at the stomach, frequent bilious greenish stools, yellowness in the eyes, face, and sometimes the whole surface, the urine often of the same tinge; pulse less frequent than natural, deep and difficult respiration, with sighing, confusion of intellect, vomiting of matter like coffee-grounds, stools sometimes mixed with the same kind of matter.

The first symptoms are a disagreeable taste in the mouth, furred tongue, great prostration of strength, soreness in the muscles and particularly about the large joints.

Treatment.—The first object in this disease is to neu-

tralize the septic tendency of the fluids, and restore the strength of the nervous system. The Arcanum, administered according to directions, is admirably calculated for this purpose, adding half a tea-spoonful of magnesia to each potion until acidity and fœtor subsides. During the process, apply to the bowels a poultice, strong vinegar saturated with common salt, adding the powders of charcoal to bring it to the consistency of a poultice, to be repeated as often as it gets warm. Frequently bathe the body with ice-water in which has been dissolved some pearlash, not so strong as to excoriate. Beef's gall and alcohol, three parts of the latter to one of the former, with the addition of one fourth part of gum myrrh, should also be occasionally applied to the surface. Lavements of the same in half gill potions, diluted with half a pint of a strong decoction of the roots of the wine bark should be frequently administered. A strong decoction of the blue cohosh may be frequently taken in table-spoonful potions. The emetic extracts administered agreeably to directions, frequently has the most happy effects. All drastic cathartics should be carefully avoided, and every thing calculated to debilitate the nervous system.

Preventive.—Avoid much exposure in the hot sun or evening air, live temperately, use no lean animal food or spirituous liquors except in bitters or saturated with the fumes of brimstone, prepared in the following manner: take a quart bottle, put in one pint of good spirits, then light a match and put it into the bottle and continue it as long as it will burn; then stop the bottle, and shake the bottle to incorporate them; repeat the process several times, then add two ounces of the powders of black pepper. Take half a wine glass three times a day, and occasionally take three or four pills of the extract of butternut, during the hotter parts of the season. Avoid low, dirty, confined lanes or houses, also sleeping on the ground floor.

FELONS.

This distressing affection is generally seated in the joints of the finger or thumb on the peritencum, and is attended with swelling and inflammation.

Treatment.—Take quick lime the size of two Indian corns, and an equal quantity of soap, bind it on the affected parts; renew every half hour until the flesh is killed down to the matter, then run a needle under the dead flesh, raise it up and cut it off.

If the affected parts are immersed in hot lye, not so strong as to excoriate at the commencement, it will generally remove them. In cases where matter has formed, apply a salve made of equal parts of allum, brimstone and blue vitriol, powdered in a brass or marble mortar, then add alcohol, honey and the white of an egg, to bring it to the consistency of a salve. Should pain and inflammation accompany the process, place the parts over the vapor of boiling lye in which the roots of blue flag have been boiled.

FLOUR ALBUS, OR WHITES.

This disease is peculiar to females, and consists in a secretion of a mucus substance from the vagina.

Causes.—Debility of the nervous system, produced by a sedentary life, an immoderate use of hot tea or coffee, frequent miscarriages, &c.

Treatment.—At the commencement of the disease, a strong decoction of white plantaine, drank freely, often gives great relief. If the complaint is of considerable standing, a course of the Arcanum should be resorted to; then take a strong decoction of the roots of blue cohosh, unicorn and carpenter's square, three times a day, in table-spoonful potions. Syringe the parts affected with a strong decoction of crane's bill and winter brake. Administer to the stomach a table-spoonful of the same preparation twice a day. Exercise on horseback, cheerful company, a generous diet, cold bathing, and cold water injected to the parts, serves as a great auxiliary.

In chronic cases, take of the following chalybeate in tea-spoonful potions, three times a day. Take of the recent columbo root eight ounces, Virginia snake root one ounce, half a pound of nails and three pints of strong vinegar, simmer in a close vessel over a moderate fire, and let it stand forty-eight hours, then press out the liquor and add one pound of honey, half pint of spirits, and one ounce of gum

myrrin, simmer as before to the consistence of molasses, and bottle for use. This preparation is also an excellent remedy for all female weakness, consumptions, asthma, worms, dropsies, jaundice, derangement, suppression of the menses, and in all low cases after fevers, &c.

GOUT, (PADAGRA.)

This is one of the most distressing affections to which the human family is subject. The paroxysms generally make their appearance in the night, and most frequently in the feet and hands, and often in the great toe.

Causes.—Acid diet, an immoderate use of wine, cider, and other fermented liquors, luxurious living, excessive indulgences, downy beds, a sedentary life, great anxiety, excessive fatigue, late hours, a continued use of spices, hot stimulating drinks, fat rancid dishes, &c. may be ranked among the inducing causes.

This disease rarely visits the youth or the female; but those gentlemen that lead an indolent life, indulge in the use of wine and sumptuous living from their youth to the meridian of life, are particularly subject to its ravages.

Treatment —A course of the Arcanum is particularly serviceable to lay the foundation of cure. During the paroxysm, foment the afflicted parts over boiling lye in which the roots of blue flag have been boiled, shielding the parts at the same time from the external air by a proper covering. This course generally gives immediate relief in the most obstinate cases. The poultice should be applied according to directions. Bathe the parts several times a day with alcohol and beef's gall, equal parts, with the addition of a little capsicum. The baths are of singular service in this disease, and should be daily used. The charcoal cathartic, in table-spoonful potions, with the addition of one tea-spoonful of magnesia three times a day, until the bowels are gently evacuated. Half a gill of lime water in new milk, two or three times a day, to aid in neutralizing the acidity of the stomach. Strong vinegar, saturated with common salt, added to an equal quantity of horse-radish root scraped, in table-spoonful potions, is an excellent remedy. The scoke-root wash applied to the whole surface of

the body, and draughts of scoke, blue flag and horse-radish applied to the feet, wrists and calf of the legs, greatly mitigates the sufferings of the patient, and often prevents the paroxysms.

When the disease is located in the stomach, hot brandy toddy, with one tea-spoonful of ginger, half a tea-spoonful of grated nutmeg and two tea-spoonful of lettuce laudanum should be given in a cup of a strong decoction of the roots of blue cohosh. Lavements of the same materials, in twice the quantities, should be applied to the bowels; at the same time apply bruised mustard-seed moistened with vinegar over the region of the stomach. This course gives great relief, and allays violent vomiting. Olive oil, in large draughts, several times a day, is highly recommended.

Dr. Warren prescribes the following for gouty patients, it being the result of experience on himself: "Take opium six drachms, castile soap one ounce, nutmeg in powders one drachm, camphor three drachms, saffron two scruples, sweet spirits of salmomiac nine ounces. Digest all these ingredients in a strong bottle in a sand heat for ten days, shaking it now and then until the last two days, then pour off the clear liquor and bottle for use."

Of this noble medicine, (says the Doctor) which no gouty man should be without, take thirty or forty drops one hour before it is wanted to operate, in a glass of strong mint water, after nothing has been received into the stomach for an hour and a half; and if in one hour the pain is not greatly mitigated, take twenty drops more and drink some time after of warm sage tea at pleasure. The number of drops must be proportioned to the violence of the pain, to be repeated every night until the paroxysms abate, lessening the number of drops two or three at a time, as the pain abates, till the dose is reduced to twelve, when the patient may desist altogether."

GRAVEL, OR STONE, (CALCULUS.)

This disease often arises from concretions of uric acid with calcarious and saline substances cemented by gelatin-

ous and albuminous matter in consequence of the urine being charged with a greater quantity than it can hold in solution.

Phosphate of lime and phosphoric salts are sometimes the constituent principles of urinary calculi, particularly in old people, whose systems evidently have these substances in excess, which fact is demonstrated by the ossification of the cartilages, arteries, &c.

Old people and children are more subject to this complaint than the middle aged, in consequence of an increased secretion of urine during those periods; as according to the general law of nature in animal bodies, those organs that are most called into action are most subject to disease or a derangement in their functions.

As a testimonial in support of the premises established, a reference may be had to history, from which we learn that cutaneous diseases are more particularly confined to hot climates, where the calculi is rarely known. From the same source we discover that in the low damp countries of a temperate climate, which are unfriendly to perspiration, the calculi prevails, and cutaneous diseases are equally rare. Thus, the leprosy, yaws, &c. had their origin in Judea and Java, where no traces of the calculi appear on record; while we are astonished at the instance, that the celebrated lithotomist, *Raw*, operated successfully on fifteen hundred patients laboring under calculi, in the damp countries of Holland.

In addition to the causes already enumerated, may be noticed impure water, unwholesome, flatulent diet, luxurious living, indolence, long retaining the urine, acidity in the stomach, &c.

Symptoms.—Pain in the lower part of the abdomen, more particularly at the time of voiding urine, which frequently passes only in drops, sometimes streaked with blood, and occasionally a discharge of a thick fetid matter, accompanied with sandlike particles.

Treatment.—At the commencement of this disease, take freely of a strong infusion of mountain mint in gill potions, sweetened with honey; at the same time take the charcoal cathartick, in table-spoonful potions, three times a day, with the addition of one tea-spoonful of magnesia to each

potion, to be continued until the bowels are gently evacuated. Strong vinegar saturated with common salt, in table-spoonful potions, with an equal quantity of honey diluted with warm water, taken several times a day, gives great relief. Should these mild administrations prove ineffectual, a course of the Arcanum and the Lithontripticks should be resorted to. Magnesia, castile soap, lime-water and honey, in half wine glass potions, should be taken several times a day, to neutralize acidity and aid in dissolving the calculi and prevent its accumulation. It should be continued until the sediment disappears. Horseradish and spike-nard roots bruised and infused in vinegar saturated with common salt, with an equal quantity of honey, for a potion, take half a wine glass three times a day. The vapour bath and alkaline wash ought to be freely used, to promote perspiration.

Preventive.—Make a constant use of honey in all your drinks, particularly in your tea or coffee. Use the charcoal cathartick with the addition of a little magnesia. Avoid low damp places. Wear flannel next the skin. Live temperately.

HEMORRHOIDS, OR PILES.

This unpleasant complaint consists in small excrescences formed about the termination of the *rectum*. When no discharge attends the complaint, it is called *blind piles*; when accompanied with a discharge of blood, they are termed *open or bleeding piles*.

Causes.—This affection may arise from costiveness, drastick catharticks, particularly aloes, corpulency, a sedentary life, an immoderate use of ardent spirits, luxurious living, lifting heavy burdens, &c.

Treatment.—Take of golden seal the whole plant, three parts, herculus heal all one part, wild lettuce four parts, bruise and add one quart of spirits; to four ounces of these ingredients then add half an ounce of red pepper, and bottle for use; to be taken in half wine glass potions three times a day. The patient should make a constant drink of cuckold, elecampan, crane's bill, beach bark; also sit over a strong decoction of beach boughs twenty or thirty min-

utes every night before retiring to bed, as hot as can be conveniently borne. This gives relief in most cases.—Should this fail, the cause may be a constriction on the *shincter* muscles. To remedy it, pass some smooth substance up the *rectum*, a pledget of tow brought to a point, dipped in warm oil introduced and continued there for an hour or two at a time. Apply the Hemorrhoid ointment according to directions. Keep the bowels gently active with the charcoal cathartick.

HERNIEA, OR RUPTURE.

This affection is a partial protrusion of the peritoneum and intestines through the layers of the abdominal muscles or pelvis. The parts most subject to injury are the navel, scrotum and groins, in consequence of a relaxation of the overtapsed edges of the muscles, which by violent straining give way and suffer the bowels to escape with other parts of the viscera.

Treatment.—When the bowels protrude through the abdominal muscles, attended with pain, fomentations of weak lye should be applied to the parts as warm as can be comfortably borne; the patient being placed on a matrass, with the hips a little elevated during the application; lavements of a strong decoction of angelica often administered in large quantities also taken into the stomach. This course will relax the constricted muscles through which the parts protruded, and permit them to return, aided by a gentle pressure of the hand. After the parts are replaced, wash with a strong decoction of yellow oak and box wood bark.—Then apply a plaster of equal parts of crane's bill, winter brake, beaten fine; the white of eggs, salt and balsom of fir, sufficient to bring it to a proper consistency. A bandage or truss should be applied, to prevent the parts from again protruding. The plaster ought to be renewed every two or three days, and the parts bathed with alcohol, beef's gall and gum myrrh. This course should be continued until a cure is effected. The patient avoiding all exposure, intemperance, flatulent diet and a costive habit. The bodily health maintained by the use of the tonicks and restoratives. A constant drink should be made of crane's bill and birth root.

HERPES, OR ERUPTIONS OF THE SKIN.

There is a great variety of affections of this kind, assuming different names, according to their location, malignancy and external appearance, such as the following: *Herpes fustulosus*, scald head or milk crust of infants. *Herpes syphiliticus*, or venereal disease. *Herpes miliaris*, or ring worm, generally on the face and neck, and *Herpes simplex* or a dry mealy eruption, affecting various parts of the body.

We shall, however, in this place, confine our remarks to the two last mentioned species; and for the better mode of treating the scald head and venereal, the reader is referred to another part of the work.

These affections are merely cutaneous; and may, when of recent origin, be cured by external applications only; but when of considerable standing, the blood becomes charged with acrimonious fluids, in consequence of a deranged state of the exhalants; they require the addition of internal remedies.

The vapour bath and the alkaline washes, with a free use of the antiscorbutics will be particularly serviceable. The cathartic pills in small potions, and the tinea ointment applied to the surface, generally proves efficacious. Frequently washing the surface with castile soap and water, then applying powdered charcoal, starch or sulphur, after the body is wiped dry, greatly relieves a smarting and itching sensation. The charcoal cathartic, with the addition of one tea spoonful of magnesia, taken two or three times a day, removes acidity, and gives tone to the bowels. A course of the Arcanum must be administered when the other applications are inefficacious. Mucilages should be freely used during other administrations. The diet composed principally of vegetables, milk, broths, soups, jellies, &c.

Ring Worms, may be removed by washing them with the expressed juice of the leaves of sedge, with the addition of one fourth the quantity of gun powder; or apply the expressed juice of garden cellendine; or the cancer salve, or a strong solution of alkaline salts, or the bruised roots of crowfoot.

HYSTERIA, OR HYSTERICKS.

This convulsive disease is peculiar to females, and is attended with a choking sensation, as if some substance was rising from the stomach into the throat, accompanied with suffocation and difficulty of swallowing. The patient often falls, convulsed with sobbings and faintings, and sometimes with alternate laughing and crying. Although the symptoms are very alarming, they are seldom attended with fatal consequences. Females of weak delicate constitutions are most subject to this truly distressing complaint, and the paroxysms may be excited by fear, grief, anxiety, angry passions, or obstructions in the customary evacuations.

Treatment.—During the paroxysms, throw cold water on the stomach and face, remove all tight clothes, remove the patient to a spacious room, with the doors and windows open; apply lavender, camphor or vinegar to the forehead and temples, hartshorn to the nose. The patient may take a tea spoonful of the lettuce laudanum, and repeat it every half hour, until relief is obtained, in a cup of a strong decoction of the roots of blue cohosh and carpenters square; this course will relieve the most distressing cases. The charcoal cathartic, together with the cold bath, are very efficacious in restoring tone to the bowels, and strengthening the nervous system. A constant drink, made of the roots of blue cohosh and carpenters square, should be used until health is restored. Exercise on horse back, pure air, early rising, nourishing diet and cheerful company contribute greatly to a speedy cure.

ICTERUS, OR JAUNDICE.

Symptoms.—Debility of the nervous system, loss of appetite, costiveness, a bitter taste in the mouth, yellow surface, particularly of the eyes, high coloured urine, dry skin, &c.

Causes.—This disease owes its origin to a deranged state of the liver, consequently impure bile is secreted, which passing into the circulation, and giving colour to the skin.

Treatment.—A course of the Arcanum generally relieves the most obstinate cases. The restoring bitters should

then be taken three times a day, in half wine glass potions, with the addition of one fourth of a tea spoonful of beef's gall. At intervals, take a wine glass of strong cider, in which a pint of black cherry bark, and half a pint of soot, to two quarts of cider, has been infused. A table spoonful of strong vinegar saturated with salt, and diluted with warm water, is an excellent remedy when the surface is dry.—The antidisepctic pills taken according to directions, is very serviceable. A syrup of the green herb of lobelia in tea spoonful potions, excites action of the liver, and should be taken for a considerable length of time on retiring to bed at night.

ITCH.

This cutaneous affection is contagious, but seldom prevails when strict attention is paid to cleanliness, pure air, and a nutritious healthy diet.

Treatment.—Take black pepper, salt, tar, gun-powder, and sulphur, one table spoonful each, pulverize in a mortar, add fresh butter sufficient to bring it to the consistency of an ointment, to be applied to the hands and joints every night for a week: or apply the itch ointment according to directions; the cathartic pills should be taken to gently evacuate the bowels. After the administration, the whole surface of the body should be washed with castile soap and water, and the apparel changed.

PALPITATIO, OR PALPITATION OF THE HEART.

This disease is a violent beating of the heart, accompanied with febrile symptoms.

Causes.—This complaint, arises from debility of the nervous system, excessive exercise, strains, contusions on the breast, taking poison, and an immoderate use of ardent spirits.

Treatment.—Lemon juice in table spoonful potions, often gives temporary relief. A shielding plaster should be applied over the pit of the stomach extending around on the left side. The patient should take half a table spoonful of equal parts of columbo, elecampane and unicorn in a cup of

some mucilaginous tea three times a day. The bowels should be gently evacuated with the cathartic pills and the cold bath daily used. Moderate, but constant exercise, particularly enjoined, with a strict avoidance of every species of intemperance.

PLEURITIS, OR PLEURISY.

This disease is a constriction on the pleura (the membrane that lines the lungs) and is seated principally on the left side, attended with the most acute pain, quick full pulse, nausea, pain in the head, slight cough, high coloured urine, &c.

Causes.—This disease is generally confined to healthy cold climates, and robust constitutions; and arises from exposure to cold and wet, while the body is in a state of exhaustion from fatigue, or a warm atmosphere, wet feet, contusion or injuries of the side, night air, &c.

Treatment.—The first object is to remove the constriction, and allay the increased excitement. For this purpose, bathe the affected side with a strong decoction of butterfly root, as warm as can be borne, or a weak solution of pearl-ash, in which the roots of blue flag have been infused.—The patient should take freely of a strong decoction of butterfly roots and mountain flax. Lavements should also be administered to the bowels in much larger quantities. The cathartic pills should be administered to evacuate the bowels. Should this application prove insufficient, a course of the Arcanum must be resorted to, together with the vapour bath.

POISONS, MINERAL, VEGETABLE AND ANIMAL.

Mineral poisons are much more fatal in their effects on the human family, than vegetable. And those to which they are most exposed, are corrosive sublimate, arsenic, tartarized antimony verdigris, preparations of lead, &c.

Those of the vegetable kingdom are the seeds of stramonium, wild parsnip, garden hemlock, &c. In addition to these may be enumerated some medicines, producing deleterious effects when taken in too large quantities, such as

degitalis, (foxgloves) Carolina pink, opium, and some few others.

Treatment.—One principle of application will be adopted in all cases of poison, with some little variations in the different kinds of poison. But the most important consideration in all cases, is to remove the substance from the system. This will most readily be effected by an emetic. When there is any indications that poison has been introduced into the system, take immediately a tea-spoonful of the pulverized seeds of lobelia, and repeat the potion every ten or fifteen minutes until the stomach is thoroughly evacuated. During the administration, take large quantities of charcoal diluted with the alkaline draught; lavements of the same materials in much larger quantities should be made to the bowels. Sweet or linseed oil, new milk, melted lard, mucilages, castile soap, &c. may be freely used. This course of treatment not only removes a great portion of the substance, but neutralizes the remaining part, and renders it less corroding.

The symptoms attending the effects of mineral poisons which act more particularly on the solids, corroding the coats of the stomach, are a burning sensation in the stomach, attended with the most excruciating pain in the bowels, unquenchable thirst, parched tongue, a distension of the abdomen, discharge of foetid matter from the stomach and bowels, delirium, spasms, &c.

It must be borne in mind, that acids are wholly inadmissible in cases of mineral poisons, on account of their oxyating qualities, as the violence of the deleterious salt depends on the number of particles that come in contact with the coats of the stomach.

Vegetable poisons more particularly affect the nervous system, producing giddiness, loss of sight, a dilatation of the pupil of the eye, loss of recollection, stupor, and sometimes convulsive vomitings, &c.

A table spoonful of ground mustard seed diluted with vinegar or warm water often gives immediate relief. The bowels should be gently evacuated with the charcoal cathartic, but drastick purgatives carefully avoided.

Animal poisons.—Having made a few remarks on the bites of venomous reptiles, it remains to make a few obser-

vations on the bite of a mad dog, and the stings of insects.

Canine madness, or Hydrophobia, literally signifying "dread of water," a circumstance peculiar to the human family.

The peculiar symptoms characterising this disease is *dread of water*. The patient is suddenly seized, and every attempt to swallow liquids is attended with the most painful suffocation. At the approach of the disease, a peculiar twinging pain shoots from the affected parts towards the throat.

Treatment.—As this disease is often attended with fatal consequences, no time should be lost in removing the virus when it is apprehended it has been communicated to the blood. Cutting should be immediately resorted to, (if practicable) pouring on hot lye, not so strong as to excoriate, for a considerable length of time. Then apply the hydrophobic powders, or the Alsine redchick-weed, in a strong decoction from half a wine glass to a gill, bathing the parts at the same time, and keeping it constantly wet with the decoction for several days, and occasionally taking some into the stomach, and administering it to the bowels in much larger quantities.

The Spanish floatant indigo, diluted to the consistency of a thick paste, which is an antidote for the bite of venomous reptiles, stings of insects, bites of spiders, &c. when applied to the affected parts should also be tried for bites of mad dogs. The indigo is to be moistened with strong vinegar, and applied to the parts: if performed immediately, prevents all dangerous symptoms, and fatal effects from snakes, spiders, bees, &c.

PROLAPSUS UTERI.

This is a very unpleasant affection; and may arise from lifting or carrying heavy burdens, particularly after confinement, before their strength is restored, or whatever is calculated to debilitate the nervous system may be regarded as predisposing causes.

Treatment.—The patient should be placed over the vapour of a strong decoction of beach boughs, as warm as can be comfortably borne. During the application, a decoction

tion of blue cohosh with a little ginger should be freely drank. After the application, which should continue twenty or thirty minutes; the patient should retire, and the parts gently placed back to their natural position, then syringe the parts with a strong decoction of yellow oak bark.—Emollient lavements should be occasionally applied, and gentle tonicks, as in other cases.

QUINSEY.

This disease is a swelling of glands of the throat, attended with pain and inflammation, and a difficulty of breathing and swallowing.

Treatment—Foment the throat over strong lye, while in a state of ebullition, then apply a poultice of roasted scoke root, as warm as can be borne, generally gives immediate relief, if applied in its forming stages. If matter has already formed, it will hasten supuration, and relieve pain and inflammation. In haling through themouth the vapour of strong vinegar, poured on some hot substance; or gargles of a strong infusion of sage sweetened with honey or the volatile linament; prepared by adding one part each of the spirits of hartshorn, lettuce, laudanum, and two of fresh butter, or sweet oil, and a small quantity of camphor.

Under this head may be noticed other diseases of the throat; the most malignant of which, is the *scartalana*, *anginosa*, or malignant sore throat.

This disease affects the *tonsils*, (small glands, situate in the upper part of the throat,) giving them a highly inflammatory appearance which terminates in suppuration or mortification. Few diseases more particularly require an immediate and proper administration than this.

Treatment.—In addition to the applications already recommended, gargle the throat with a strong decoction of the root of the blue cohosh, the whole plant of goldenseal two parts and one part of blood root sweetened with honey, and swallowing a little frequently. The emetic solution administered according to directions gives great relief. A strong infusion of spikenard should constitute the principal drink. The parts should be thoroughly rubbed with

a swab several times to remove all putrescent matter. It may be proper to observe that all external applications made to the throat should be cold instead of warm, as recommended for the quinsey. Gargle of charcoal, beef's gall, gum myrrh, gold thread, seeds of lobelia and honey, properly diluted with vinegar is an excellent remedy.—The bowels should be gently evacuated with the charcoal cathartic, with the addition of one fourth of a tea-spoonful of beef's gall. The most grateful staulants and tonicks together with a nutritious diet particularly enjoined.

RHEUMATISM.

This disease is generally located in the large joints ; it sometimes, however, affects the whole system.

Causes.—A sudden exposure of the body to a wet or cold atmosphere, while in a state of exhaustion from fatigue, damp clothes, excessive exercise, lifting heavy burdens, &c.

Treatment.—The Rheumetick extracts administered according to directions, relieves the most obstinate cases. In cases of extreme pain, foment the parts over strong lye, in which has been infused a quantity of the roots of blue flag, while boiling, or apply the roots from the lye sufficiently diluted with water, to prevent excoriation, as warm as the patient can bear. The shielding plaster should be applied, after all painful sensations are removed, and an equilibrium in the circulation established. The Rheumatic bitters are to be taken three times a day and the washes occasionally until health is fully established.

RACHITIS, OR RICKETS.

This disease is peculiar to children, and those between nine months and three years, are most subject to its ravages, and it rarely continues till the age of puberty.

Symptoms.—The peculiar characteristical features attending this disease, are a protrosion of the breast bone, an enlargement of the head and joints, a prominent forehead, an extension of the abdomen, a relaxation of the cartilages, and a general emaciation of the system.

Causes.—The immediate cause of this disease, is a lack of the deposition of the phosphate of lime, (the principle constituent of bone) in the cartilaginous substances to give them a sufficient solidity and strength to support the increased weight of the body, and the elasticity of the muscles, hence the curvation and deformity of the bones.

The incipient cause of this defect in the deposition of this *animal gluten*, in the cartilaginous bones, is acidity in the alimentary canal, which produces debility in the assimilating functions and neutralizes in some measure this alkaline salt. Bad nursing, want of exercise, an exposure to damp or confined air, &c.

Treatment.—The only requirement in this complaint, is to neutralize the acidity, restore tone in the digestive organs, and strengthen the nervous system. To accomplish this object, the emetic extract in one fourth, tea-spoonful potions should be administered every fifteen minutes in half a table spoonful of lime water, until the stomach is thoroughly evacuated. The bowels must be kept active with charcoal and magnesia; and the cold bath applied every morning. The restoring bitters, are to be taken in small quantities, several times a day, and the scoko wash occasionally applied. The diet ought to consist principally of milk and eggs.

RUBEOLA, OR MEASLES.

This contagious disease, which affects a person only once in life, frequently makes its appearance in the form of an epidemic, without any exposure to a person labouring under the complaint.

Symptoms.—This eruptive fever of Dr. Willich, generally commences with chills, succeeded by an increased heat of the surface; thirst, nausea, headache, inflamed eye balls, dry skin, quick pulse, &c. And about the fourth day, pustules make their appearance on the face, and gradually extending over other parts of the body. At this period, nausea and vomiting ceases, but is succeeded by a cough, and an increase of fever, with a difficulty of breathing. The tumors gradually scales off with the cuticle.

Treatment.—An emetic at the commencement of the disease; a potion of the cathartic pill and a free use of the antiscorbuticks and sudorificks, accompanied with a light but nourishing diet, cool room, fresh air, and a careful avoidance of all exposure, would prevent any fatal consequences.

The great desideratum in this as well as in all other eruptive diseases is to keep up a proper excitement in the nervous system, and enable the exhaling arteries to excrete the excrementitious and acrimonious fluids from the blood.

But if from exposure to a damp or cold atmosphere, the exhalants become constricted from confinement to a warm room the nervous system becomes relaxed, the most powerful stimulants must be resorted to. In cases of constriction the emetic extracts in table spoonful potions should be immediately administered, accompanied with the vapour bath and a free use of the sudorificks and stimulating lavements. If relaxation is the cause, give a cup of a strong decoction of blue cohosh, with the addition of one table spoonful of the lettuce laudanum; lavements in twice the quantities must be applied to the bowels, and the scone wash to the surface. Tonics composed of hercules, unicorn, and gentian taken as in other cases.

I shall conclude by making a few remarks on the sudden disappearance of the eruption before the deleterious fluids are removed from the blood. The prevailing idea, even among the most scientific, that when eruptions suddenly disappear they strike inwards: is wholly unfounded, and it will require but little reflection to discover its falsity. It is contrary to the laws of nature, in animal bodies, for vessels or ducts to act in a two fold capacity, therefore the excretory vessels can no more perform the office of absorbents (as all capillary vessels, even the veins are finished with valves, the principal circulation) than water can be forced down a pump against the valves, which would be strictly analogous. This sudden disappearance is much more rationally accounted for in the diminution of the excretions, arising from a torpidity of the exhalants.

SCROFFULA OR KING'S EVIL.

This is a swelling of the conglubate glands more particularly of the neck ; under the chin, behind the ears, and sometimes in other parts of the body.

Causes.—Low damp habitations, a sedentary life, acid indigestible diet, drinking impure water, or what ever tends to debilitate the nervous system and produce viscid co-agulable lymph may be considered exciting causes.

Treatment.—In cases of considerable standing a course of the *Arcanum* should be administered. Then apply a poultice of the roasted roots of white lilly and mandrake bruised, to the tumours. The patient should take freely of the antiscorbuticks and the cathartic pills in small quantities for a considerable length of time, to excite action of the glandular secretions. The baths and the scoke wash daily applied to stimulate the excretory vessels and strengthen the nervous system. The cancer plaster should be applied in obstinate cases.

STRANGURY.

This disease consists in a difficulty of voiding urine, and is generally attended with excruciating pain.

Causes.—This complaint may proceed from the application of blisters, gravel ; and sometimes from the use of spirits of turpentine either taken, or externally applied.

Treatment.—The diureticks should be taken freely in a table spoonful of strong vinegar saturated with salt and diluted with a wine glass of hot water ; dashing cold water on the parts, often gives relief. Should these administrations prove in-effectual, a catheter must be introduced to draw off the water.

SYPHILIS, OR VENEREAL DISEASE.

Many speculative suggestions have arisen relative to the origin of this disease, which is peculiar to the human species, as no accounts appear on record of its being found amongst the animal creation.

This monstrous scourge, which can be purchased only at the expense of virtue on one part or the other, has generally been placed to the credit of the French nation.

This filthy and often fatal malady, it seems was designed for a barrier against a violation of the sacred principles, Chastity, so dearly prized by all nations in every age and of every grade, from the highest state of civilization and literary improvement down to the most abject slavery and barbarism.

Symptoms.—A smarting sensation in voiding urine are its first indications, succeeded by a discharge of a yellowish mucous matter from the arethra: pain and swelling of the glands of the groins: small ulcers make their appearance in the throat, fauces uvula and various parts of the body in the form of blotches accompanied with itching: pain in the bones, particularly in the shins, and sometimes little knots on the shin bones are attending symptoms. This description with the known exposure of the patient will enable him to distinguish *syphilis* from *scroffula*.

Treatment.—This disease in a special manner claims early attention, as it yields to simple remedies in its forming stages; but if suffered to progress it often baffles every effort to eradicate the poison.

A strong infusion of the bark of the root of babary taken several times a day in gill potions; also applied by a small syringe to the urethra generally gives immediate relief. The salivating powders with a free use of the antiscorbuticks and syphilis preparations and a mucilage of the twigs of sassafras are efficacious remedies in cases of standing; the oil of balsam ten drops on loaf sugar several times a day; the scocke wash and the baths greatly facilitate the cure. If *Chancre* (*venereal sore*) make their appearance apply equal parts of scocke and mandrake roots, bruised and moistened with pearlash water. If fungus flesh should arise in the ulcers, apply the cancer plaster sprinkled with the powders of blood root. In cases of long standing a course of the *Arcanum* should be administered, and repeated until the verus is eradicated. Tonicks composed of lion's foot, snake root, hercules unicorn and sarsaparilla should be taken three times a day.

TETANUS, OR LOCK JAW.

Causes.—This affection consists in an involuntary contraction or spasms of the muscles of the face, without af-

fecting the senses: and generally from slight wounds, such as punctures of a nerve or tendon, slight lacerations of the hands or feet, or from splinters under the nails, or from irritating substances in the stomach or bowels, &c.

Treatment.—If the cause arises from punctures, apply hot lye brine, in which a quantity of the roots of blue flag have been infused at the same time, take a strong infusion of the roots of blue cohosh in gill potions, to be repeated every ten minutes until the spasms are released; lavements should be also administered to the bowels in much larger quantities, with the addition of one table spoonful of lettuce laudanum and one table spoonful of the emetic extract, to be repeated every twenty minutes, if required.

When the cause is due to internal causes, the emetic extracts in table spoonful potions or the pulverized seeds of lobelia, in half the quantity, should be administered in a cup of a strong cohosh tea, with the addition of the anthalminticks. The patient should be placed over the vapour of boiling lye, shielded from the dense air by a blanket. A hot substance enclosed in a cloth wet with pearlash water, applied to the bowels, often gives relief.

Very little variation will be required in the treatment of any other cases of spasms.

THRUSH, OR CANKER.

This is a common complaint among children, arising from acrimonious fluids in the blood, excoriating tender parts, particularly of the mouth, and sometimes the whole alimentary canal is affected.

Treatment.—Gargle with blue cohosh roots, and the whole plant of golden seal, sweetened with honey, adding a little alum. The mouth should be frequently rubbed with a cloth moistened with the gargle, swallowing a little frequently; this generally gives immediate relief. A strong syrup of the herb of golden seal, should be given in tea-spoonful potions every hour until the bowels are gently evacuated.

TINEA CAPILIS, OR SCALD HEAD.

This infectious complaint is seated in the roots of the hair, producing a secretion of an icherous mucus forming into a crust or scab, spreading over the head.

Causes.—Uncleanliness, acid, indigestible food, or from acrimonious fluids of *wet nurses*; also from contact with a person infected with the virus.

Treatment.—In cases of long standing, a course of the *Arcanum* must be administered. Then shave the head and wash with castile soap and water several times a day, then anoint with neat's foot, or some soft animal oil, to dissolve the crust. The head should then be washed as clean as possible as before, and wiped dry, and dusted with powdered charcoal to absorb or neutralized septic mucus.—After the coal is saturated with the viscid matter, it should be washed off as before, and anointed with the *Tinea* ointment. A cap should be worn to shield the head from the air, and preserve a suitable degree of warmth and promote perspiration. The patient should make a free use of the antiscorbuticks, and the cathartic pills in small quantities, to promote a general action in the glandular secretions also take the restoring bitters. This course should be pursued for a considerable time after the complaint is apparently removed.

TOOTH-ACHE.

Treatment.—Take strong vinegar saturated with salt, and alcohol, hold a table spoonful in the mouth fifteen minutes and renew it as occasion requires. After the pain has subsided apply bees-wax to the cavity; or apply a poultice of the powders of slippery-elm and ginger as hot as the person can bear, in table spoonful potions, to be repeated every two or three minutes, increasing the temperature at each renewal until the nerve is killed.

WHITE SWELLING.

This complaint is generally located about the hip, knee, or elbow joints; and commences with severe pain, suc-

eeded by a tumour or swelling with very little inflammation. If the complaint is neglected the swelling increases, assuming a smooth glossy appearance, changing very little the colour of the skin. The tumour at length suppurates and discharges a fetid humour.

Causes.—This affection may arise from scrofula, rheumatism, &c. or from a long continuance in cold water when the body is in a state of exhaustion from fatigue ; or from external injuries.

Treatment.—At the commencement, place the parts over the vapour of strong lye, in which the roots of blue flag have been infused as warm as the patient can conveniently bear, shielding him from the air during the process. Then apply a poultice of the bruised roots of blue flag, and scoke boiled in lye, saturated with salt, adding the powders of slippery-elm, to bring it to proper consistency. This process generally gives relief, and prevents the formation of matter ; or take alcohol one quart, salt and the dirt from the back of a chimney one pint each in powders, and tobacco four ounces finely cut, stirring in rye-meal, to bring it to the consistency of a poultice. After applying this preparation for one or two hours, wash the parts with strong vinegar, then apply the roots of crowfoot and horseradish roots bruised. During these administrations the patient should drink freely of ginger tea or some other sudorificks, and tonicks.

WORMS.

A short extract from that scientific writer, Dr. Rush, may be interesting to the reader.

When we consider how universally worms are found in all young animals, and how frequently they exist in the human body without producing disease of any kind, it is natural to conclude that they serve some useful and necessary purpose in the animal economy. Do they consume the superfluous aliment which all young animals are disposed to take before they have been taught by experience or reason the bad consequences which arise from it ? It is no objection to this opinion, that worms are unknown in the human body in some countries. The laws of nature are diversified, and often suspended, under peculiar cir-

circumstances ; in many cases where the departure from uniformity is still more unaccountable than in the present instance.

Nine of ten cases which I have seen of worms, have been in children of the grossest habits and vigorous constitutions. In weakly children, I have often known the most powerful anthelmintics given without bringing away a single worm. If these medicines have afforded any relief, it has been by their tonick qualities. From this fact, is it not probable—the conjecture I am afraid is too bold, but I will risk it—is it not probable, I say, that children are sometimes disordered from the want of worms? Perhaps the tonick medicines which have been mentioned rendered the bowels a more quiet and comfortable asylum for them, and thereby provide the system with the means of obviating the effects of crapulas to which children are disposed. I confine the salutary office of worms only to that species of them which is known by the name of the round worm, and which occurs most frequently in children.”

The species of worms most frequent in the human body are the following: the *Ascarides*, a small white worm; *Teres*, or common round worm; and *Tenia*, or tape worm.

Causes.—Improper and an over quantity of diet; consequently indigestion, distension of the abdomen, starting during sleep, an insatiable appetite, acid eructations, fetid breath, and generally attended with some degree of fever.

Treatment.—Take alum and salt, equal quantities, in powders, one tea-spoonful, and cane molasses one table-spoonful, to be taken every morning one hour before breakfast for one week. Then take the cathartick pills sufficiently to thoroughly evacuate the bowels. Take also the anthelminticks according to directions. In cases of considerable standing, these administrations must be preceded by an emetick; and cathartick tonicks are very important, and should be freely used in all stages of the disease, such as poplar bark, lion's foot, snake root, Hercules, beef's gall, &c.

But of all the medicines that I have administered, says Dr. Rush, I know of none more safe and certain than the simple preparations of iron, whether they are given in the

form of filings or rust of iron. If they ever fail of success, it is because they are given in too small quantities. I generally prescribe from five to thirty grains every morning, to children from one to ten years of age.

OF PARTURITION, OR LABOUR.

It is considered impracticable, in a publication calculated for general circulation, to give an anatomical description of all the organs concerned in the reproduction of the species, or to enter into a detail of midwifery sufficiently extensive to enable a person to manage in difficult cases of unnatural presentation. But I shall endeavor to give every necessary information to qualify any person of common capacity to manage in all common cases in their own families; (and if proper attention and prudence should be observed during gestation, unnatural and difficult cases would rarely occur.)

Labour is a natural process, arising from a contraction of the uterine organs to expel its contents; and in ninety-nine cases out of an hundred, would be fully competent for the purpose, without any artificial aid, provided a proper excitement be kept up in the nervous system.

The immediate cause of labor, is doubtless owing to an irritation produced by a distention of the uterine system.

Symptoms attending the approach of labour, are pains in the loins and back, terminating in the *pubes*; afterwards a discharge of mucus, often streaked with blood from the vagina, called the *show*.

But all of these symptoms are not conclusive evidences of labour; yet every necessary preparation must be made, and the patient should take a potion of the *Parturient*, and repeat it every ten minutes until the pains (if false) subside; or if they are true, are greatly mitigated. If the pains are severe, the potions should be administered in much larger quantities and more frequently.

The patient should keep an erect posture as long as convenient; and when it is ascertained that labour has actually commenced and considerably progressed, she should be placed on the knees of her husband or some other strong person, (provided she has no particular choice in

the position) with her feet firmly placed on chairs each side of the operator.

After having guarded against every thing calculated to disturb the mind of the patient, and frequently consoling her with the prospects of a safe and probably easy delivery, he should patiently wait until some part of the foetus or the membrane filled with a fluid protrudes. If any interposition is made, it should be to satisfy the patient, and not to hasten parturition.

At the presentation of the foetus, if the fluid membrane has not been ruptured spontaneously, it must be done by the operator, which generally suspends the pains during the discharge of the water, and sometimes the foetus is expelled with the fluid.

In tedious labour, particularly with first children, when a laceration of the *perinaeum* is apprehended, the progress of the foetus should be retarded by counter pressure.

After the foetus is discharged, it should be removed a convenient distance and laid on the side, to remain till pulsation and circulation is fully established, and the *funis* becomes soft and flaccid. The *funis* should be tied one inch from the body of the child.

Management of the Placenta.—Having given the child to some of the attendants, the placenta next claims attention.

After a short interval, the uterine organs are again called into action to expel the remainder of its incumbrance. The same gentle means should be used as before directed, taking advantage of the pains, aided by a gentle effort of the patient; the operator should by moderately pulling the *funis*, facilitate its removal. But if the placenta resists the mild efforts, the operator should desist, and place the patient over the vapour of strong lye, or hemlock boughs, while in a state of ebullition, or apply fomentations of a weak solution of pearlsh and water to the bowels, as warm as can be conveniently borne, and wait thirty or forty minutes, or even an hour; during the interval, gentle pressure on the abdomen in different directions should be made to stimulate the uterine system to a contraction. Then again take hold of the *funis*, and in the manner before directed, aided by the pains, effect the removal of the placenta.

The introduction of the hand to separate the adhesion, or to assist the expulsion, is cruel and unnatural, and is not necessary in one case of several thousand. We had better wait an hour or two, than resort to so harsh and painful a process.

After the patient has been put comfortably in bed, she should be left to herself to get a little repose, and restore the exhaustion of the nervous system which will be consequently produced by the labor throes.

The patient should take once or twice a day of a strong decoction of the roots of carpenter's square, in wine glass potions, to produce a proper discharge of the *Lochia*, the obstruction of which is the origin of what is termed child-bed fever.

If flooding should ensue, apply a cloth wet with cold salt and water to the bowels, and drink freely of some hot teas, such as blue cohosh and ginger, or the sudorificks.

In cases of protracted labour, attended with rigidity of the vagina and os-externum, in addition to the fomentations recommended, administer the emetick extracts in table-spoonful potions in a cup of a strong decoction of the parturient, with the addition of one table-spoonful of spirits sweetened with loaf sugar, to be repeated every fifteen or twenty minutes until the parts are sufficiently relaxed.—Emolient lavements applied to the bowels, proves a great auxiliary.

For further information on the subject, particularly as preparatory to labour, the reader is referred to the article *Parturients*.

APPENDIX.

IT has been thought advisable, for the instruction of families, to lay down a concise and simple plan of treatment in all cases of disease at their commencement, which, if strictly observed, would remove ninety-nine cases of an hundred immediately, and greatly mitigate every other, so that fatal consequences would rarely be known.

The great desideratum in the healing art, according to our theory, is to maintain a proper energy and excitement in the nervous system, and thus preserve an equilibrium in the circulating fluids, and tone in all the glandular secretions and excretions.

The first symptoms indicating disease are langour, drowsiness, loss of appetite, sometimes accompanied with slight chills, nausea and aversion to exercise, &c. arising from debility and torpidity of the nervous system.

Treatment.—Take from one teaspoonful to a table spoonful of the lettuce laudanum in a cup of a strong decoction of the roots of the blue cohosh, to be repeated two or three times if necessary every hour; during the interval take a potion of pills composed of the extracts of the barks of butternut, white ash and the whole plant of the golden seal, evaporated to the consistency of molasses, and brought to a state of pilling by adding the powders of ginger and black paper in equal quantities: to be repeated every hour if required. If these administrations prove inefficacious, the patient should retire to bed and take the emetic extracts in a cup of sage tea, and repeat it every twen-

ty minutes until the stomach is thoroughly evacuated, at the same time apply some hot substances wrapped in a cloth wet with vinegar to the feet. The patient should drink freely of ginger and sage tea, and occasionally of the alkaline draught and the sudorificks. This course should be continued for several hours, and until all painful sensations are removed and the perspirable matter becomes limpid. After the process is over, wash the surface with a cloth wet with cold salt and water, and the apparel changed. The patient should take the lettuce laudanum in the cohosh tea, once in seven hours with the addition of half a tea spoonful of the powders of Hercules' heal-all, colombo or golden seal, to each potion.

After the completion of the process, should febrile symptoms continue, a course of the Arcanum must be resorted to, to be accompanied with the vapour bath, and the alkaline wash, followed with the cold bath and the restoratives, which should be repeated every day if occasion requires. The restoratives should be continued for some time after the patient is apparently well, and all exposure carefully avoided for one or two days. The patient should take every morning, half a teaspoonful of strong vinegar saturated with common salt, diluted with half a wine glass of boiling water.

Prevention.—Take a bottle half full of good spirits, and burn a brimstone match in the bottle until it goes out, then remove the match, close the bottle and shake it till the smoke is incorporated with the spirits; repeat the process several times, then add the bruised plant of wild lettuce, half a pint and one gill of the powders of the roots of the blue cohosh; take one table-spoonful every morning with an equal quantity of honey and half a teaspoonful of the powders of black pepper during the sickly season, also take every other day, one of the butternut pills to excite a proper action in the primavia, and occasionally the charcoal cathartick.—The surface of the body should be bathed twice a week with the alkaline wash. The diet should consist principally of vegetables with an occasional use of salted fat pork with a little pepper and vinegar. Lean fresh meat should be wholly rejected during the hotter parts of the season; pure

water ought to be the principal drink, with the addition of a little honey or molasses and ginger.

If symptoms of worms make their appearance, give three fourths of a teaspoonful of equal parts of alum and salt in a table spoonful of molasses every morning one hour before breakfast for a few days, then a potion of the cathartic pills.

Having omitted several valuable preparations in their proper place, it is deemed advisable to insert them in the appendix.

MINERAL WASH.

Take crolius Martus, one table spoonful, then add the powders of white vitriol sufficient to bring it to a peach blow colour; one teaspoonful of the powders are to be dissolved in half a pint of spring water; to be applied to recent wounds, and wetting the bandage frequently, prevents soreness or inflammation and causes it to heal; it is also serviceable applied to foul ulcers, cancers, fever sores, &c.—

FOR COUGHS.

Take balm of gilead buds and sun flower seeds bruised, half a pint, and cow-foot half an ounce, and add one quart of gin, to be taken in half wine glass potions several times a day.

Or, Take equal parts of the bark of the root of sassafras, skunk cabbage, cow-foot and wild turnip, in powders :—mix, and take one teaspoonful in honey several times a day.

ANTI CALCULOUS POWDERS.

Take the blood of a live Rabbit, put it into a close vessel, then add the skin and place it over a moderate heat until the skin is crisped or brought to a state of pulverizing without burning. The powders are to be taken in teaspoonful potions in a cup of a strong infusion of horse mint or the expressed juice, with the addition of one table spoonful of honey, to be repeated as circumstances require. It is said to dissolve a gun flint in twenty-four hours.

OINTMENT FOR PILES.

Take the seeds of lobelia, reduce them to a fine powder, then add opossum oil, or oil of butter, to bring it to the consistency of an ointment, to be applied to the affected parts several times a day.

CANCER SALVE.

Take the bark of the roots of ivy (laurel,) boil in a sufficient quantity of water to extract the strength, then evaporate over a moderate heat to the consistency of molasses, then add lard and simmer it to the thickness of a salve, to be applied to cancers in any stage, and renewed daily until cured. This is said to be a sovereign remedy.

OINTMENT FOR BURNS.

Take half a pound of fresh butter or lard, and half a gill of tar, melt and stir them until properly blended, then add one tea-spoonful of verdigris and two of sulphur, and stir until cold. This is a remedy for scalds, burns, humorous old sores, &c.

FOR THE HOOPING COUGH.

Dissolve one scruple of crude tartar in a gill of soft water, then add ten grains of *Cochineal* (obtained at the druggist's) finely powdered, sweetened with loaf sugar, to be taken in tea-spoonful potions every hour, until relief is produced. This generally proves a sovereign remedy in one week.

FOR THE ASTHMA.

Take senna and annis seed one ounce each, pulverized, two ounces of cream of tartar, and one ounce each of spermaceti, sulphur, and skunk cabbage, to be taken in potions, from one to two tea-spoonfuls in a table spoonful of honey, on retiring to bed at night.

FOR THE TETTERS,

OR OBSTINATE ERUPTIONS OF THE SKIN.

Take half a pint of brandy, half a gill of tar, and three tea-spoonfuls of pearlsli, beat and stir them together until thoroughly incorporated and bottle for use ; apply it to the parts affected several times a day with a feather until a cure is effected.

FOR VENOMOUS BITES, OR STINGS.

Take one tea-spoonful of indigo, moistened to the consistency of a thick paste with strong vinegar, apply it to the parts affected ; if done immediately all fatal consequences will be prevented.

FOR A FELON:

Take sulphur, alum and blue vitriol, equal parts, in powders, to be moistened with equal quantities of spirits, honey and the whites of eggs, to bring it to a proper consistency, applied to the affected parts, and changed occasionally, will extract the core in two or three days, without injuring the joint. It will also dissolve fungus flesh, and cures cancers.

ADHESIVE SALVE.

Take linseed oil and fresh butter half pint each, and white pine turpentine one gill, boil them together until it would scorch a feather, then add red lead finely pulverized until it is brought to the consistency of soft wax. This plaster is to be spread on thin leather, and may be applied to recent cuts, or foul ulcers, which is not to be taken off until it comes off of itself. If matter collects under the plaster, a hole should be made through it with an awl, and permit it to discharge.

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